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THE SCIENTIFIC DAYS OF THE
"PROF. DR. MATEI BALS" NATIONAL
INSTITUTE OF INFECTIOUS DISEASES

8TH EDITION

BUCHAREST
OCTOBER 17-19, 2012

PROGRAM AND ABSTRACTS

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NATIONAL INSTITUTE OF INFECTIOUS DISEASES
"Prof. Dr. MATEI BALŞ"

EUROPEAN HIV/AIDS & INFECTIOUS DISEASES ACADEMY

THE SCIENTIFIC DAYS OF THE NATIONAL INSTITUTE OF INFECTIOUS DISEASES "PROF.DR. MATEI BALŞ"

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GREETING MESSAGE

Dear colleagues and friends,

It is our honor and pleasure to welcome you to the 8th edition of the Scientific Days of the National Institute for Infectious Diseases "Prof. Dr. Matei Balş". Given the recent scientific development in the area of hepatology and infectious diseases, this event provides the opportunity for renowned national and international experts to present their work and provide a most necessary update for both clinical practitioners and researchers.

We thank our keynote speakers and the large number of physicians who have honored our conference by submitting abstracts for oral or poster presentations. Each year, the community of hepatologists and infectious diseases practitioners grows larger and we are proud to be able to organize this event as a meeting and collaboration ground for both specialties.

We would like to extend our thanks to Prof. Dr. Monica Acalovschi, the Editor in Chief of the Journal of Gastrointestinal and Liver Diseases, who has kindly accepted to publish the conference abstracts as supplement issue to the Journal, due to the common grounds that the conference shares with the specialty of hepatology and gastroenterology.

Sincerely,

Prof. Dr. Adrian Streinu-Cercel

President of the Conference

Note: Abstracts have only received English-language editing prior to publishing; all responsibility for the contents of the abstracts belong to the authors.

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WEDNESDAY, OCTOBER 17th, 2012

Hall A

12:30-13:00 **Welcome speech**

13:00-14:20 **Precongress courses**

Update in the physiopathology and diagnosis of CNS infections

Update in the physiopathology and diagnosis of inferior respiratory pathways infections

Moderators: Prof. Dr. Adrian Streinu-Cercel, Prof. Dr. Daniela Adriana Ion, Prof. Dr. Florica Stăniceanu, Prof. Dr. Ştefan Sorin Aramă

14:20-14:40 **Coffee break**

14:40-16:00 **Precongress courses**

Update in the physiopathology and diagnosis of digestive tract infections – *Prof. Dr. Ştefan Sorin Aramă, Asist. Lect. Dr. Cătălin Tilişcan*

Update in the physiopathology and diagnosis of chronic viral hepatitis – *Lect. Dr. Anca Streinu-Cercel, Asist. Lect. Dr. Cătălin Tilişcan*

Update in the physiopathology and diagnosis of cutaneous and soft tissue infections – *Dr. Lia Cavaropol*

Moderators: Prof. Dr. Adrian Streinu-Cercel, Prof. Dr. Daniela Adriana Ion, Prof. Dr. Florica Stăniceanu, Prof. Dr. Ştefan Sorin Aramă

16:00-16:30 **Coffee break**

16:30-18:00 **New therapeutic options for critical patients in Romania** – *Prof. Dr. Adrian Streinu-Cercel, Assoc. Prof. Dr. Victoria Aramă*

18:00-18:45 **A new approach to the management of the HIV patient** – *Prof. Dr. Adrian Streinu-Cercel, Lect. Dr. Anca Streinu-Cercel*

18:45-19:30 **Launch of new research projects via the European HIV/AIDS and Infectious Diseases Academy**

19:30-20:00 **Infectious diseases, a one way street**
Opening ceremony
Press conference
Prof. Dr. Adrian Streinu-Cercel

Hall B

12:30-14:30 Session 1. HIV/AIDS in Romania: past present future

Mariana Mărdărescu – Women for positive action
Simona Erşcoiu – New Candidates for HIV Infections in Romania
Mihai Mitran – HPV/HIV Coinfection. Current Phase Results
Dan Florin Mihăilescu – Molecular Modeling of Unliganded and Glycosylated Structures of HIV-1 Gp120 Trimers
Cătălin Tilişcan – Interleukin-6 and Tumor Necrosis Factor-Alpha Patterns in a Cohort of HIV-1 Positive Patients undergoing Retroviral Therapy
Mariana Mărdărescu – Prevention of HIV Infection through Materno-Fetal Transmission, an European Challenge
Alina Cibea – Special Considerations on Children Exposed Perinatally to HIV in Romania. Psycho-socio-economic Implications
Catrinel Ioana Cercel – Neurocognitive Screening with Neuropsychological Tests in HIV Patients
Bogdan Cîrciumaru – Infectious Diseases and Social Stigma
Carina Matei – Social Factors Influencing the Emotional Balance of HIV Positive Women
Q&A

Moderators: Dr. Mariana Mărdărescu, Dr Mihai Mitran, Psih. Odette Chirilă, Dr Sorin Petrea

14:30-14:40 Coffee break

14:40-16:00 Session 2. Aspects of infectious diseases

Lucia Pîrţînă – The Efficiency of Antiretroviral Therapy (ARVT) in HIV Infected Patients
Andreea Moldovan – Colonization of Patients with Multiresistant Bacteria in Romania: is this the Tip of the Iceberg?
Vasile Benea – Antibiotic Resistance of *Neisseria gonorrhoeae*
Delia Mihaela Herghea – Wound Infections in Elective Resection for Rectal Cancer
Brînduşa Ţilea – Infectious Complications after Heart Transplant
Gheorghe Plăcintă – Particularities of Manifestations of *Toxocara* Invasion
Doina Lupu – Family Outbreak of Q Fever
Q&A

Moderators: Assoc. Prof. Dr. Otilia Elisabeta Benea, Prof. Dr. Sorin Rugină

16:00-16:30 Coffee break

THURSDAY, OCTOBER 18th, 2012

Hall A

08:30-08:50 Session 3. *Clostridium difficile* infection: new concepts and new options for diagnosis and management

Violeta Molagic – Clostridium difficile Infection: an Old Problem with New Challenges
Şerban Benea – Clostridium difficile Infections Hospitalized in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest, Romania
Q&A

08:50-09:45 Session 4. Update in the diagnosis of difficult to treat infections

Dragoş Florea – PCR and Mass Spectrometry – A New Diagnostic Method for Infectious Diseases
Adriana Hristea – PCR Coupled with Electrospray Ionization and Mass Spectrometry vs. Real-time PCR in Detection of *Mycobacterium tuberculosis* Resistance Mutations to Rifampin and Isoniazid
Ruxandra Moroti – PLEX-ID in the Diagnosis of Viral CNS Infections
Lucian Negruţiu – Update in Nanobiotechnology Therapeutics of Viral Infections
Q&A

Moderators: Prof. Dr. Olga Dorobăţ, Dr. Dan Oţelea, Assoc. Prof. Dr. Gabriel Popescu

09:45-10:00 Coffee Break

10:00-11:00 HIV and the CNS in the HAART era. Tomorrow's protection starts today – *Prof. Dr. Adrian Streinu-Cercel, Assoc. Prof. Dr. Otilia Elisabeta Benea*

11:00-11:45 HIV and HAART CNS penetrability
Dr. Carolina Ionete, USA
Dr. Mireya Wessolossky, USA
Moderators: Prof. Dr. Adrian Streinu-Cercel, Assist. Lect. Dr. Liliana Preoţescu

11:45-13:15 Treatment challenges in severe acute infections

11:45-12:00 The macrolide - an option – *Assoc. Prof. Dr. Victoria Aramă*
12:00-12:45 The therapy of severe infections is not an option. It's a must! – *Prof. Dr. Adrian Streinu-Cercel, Lect. Dr. Anca Streinu-Cercel*
12:45-13:15 The efficacy of Colistin in severe infections – *Prof. Dr. Adrian Streinu-Cercel*

13:15-14:30 Lunch

13:15 Poster Sessions – Poster Area

14:30-15:00 A new therapeutic option: Phagothérapie en Europe
Dr Olivier Patey – France
Moderator: Assoc. Prof. Dr. Victoria Aramă

15:00-16:45 The management of the HIV infected patient in 2012, after 30 years of HIV history

15:00-15:30 Completely active molecules – a solid foundation for the treatment of poly-experienced patients – *Prof. Dr. Adrian Streinu-Cercel*
15:30-16:15 If I am good and useful, why do you misuse me? – *Assoc. Prof. Dr. Otilia Elisabeta Benea*, *Prof. Dr. Adrian Streinu-Cercel*
16:15-16:45 Tolerability – a key factor for the long-term adherence HIV infected patients – *Dr. Giovanni Guaraldi*, *Italy*

16:45-17:00 Coffee break

17:00-19:00 Molecular Mechanisms of Virus-Host Interactions and Liver Disease

17:00-17:40 The management of viral hepatitis – *Prof. Dr. Adrian Streinu-Cercel*
17:40-18:20 Medical excellence in virology – *Assoc. Prof. Dr. Victoria Aramă*
18:20-19:00 Tradition and progress in the HCV infection – *Prof. Dr. Adrian Streinu-Cercel*

Hall B

08:30-09:45 Session 5. HIV infection: new concepts and new treatment options
Otilia Elisabeta Benea – Main Factors Associated with Unfavorable Clinical Evolution of *C neoformans* Infection in HIV Positive Patients
Otilia Elisabeta Benea – Factors Associated with Unfavorable Clinical Outcome in HIV-TB Coinfected Patients
Ana Maria Tudor – Assessing the Adherence in Experienced HIV-infected Patients
Andra Elena Petcu – Acute Respiratory Failure in HIV Positive Patients
Mariana Mărdărescu – Epidemiology of HIV/AIDS in Romania in the European Context
Mihai Mitran – Pregnancy and Birth in HIV Seropositive Women
Q&A

Moderator: Dr Mariana Mărdărescu, Prof. Dr. Augustin Cupşa

FRIDAY, OCTOBER 19th, 2012

Hall A

08:30-9:45 Session 6: Bacterial infections in IVDU & State-of-the-art in intensive care

Otilia Elisabeta Benea – Clinical Aspects, Management and Prognosis of Right-sided Infective Endocarditis in Intravenous Drug Users
Iulia Niculescu – The Role of Ethnobotanical Drugs on the Recent Outbreak of Right-sided Endocarditis in Romania
Doina Iovănescu – Optimization of the Intensive Care Unit Management
Alexandru Nica – Guidelines and Objectives for Volemic Resuscitation in Septic Shock
Cătălin Apostolescu – Dysnatremia in Patients with Heat Stroke
Q&A

Moderator: Prof. Dr. Emanoil Ceauşu, Dr. Doina Iovănescu

09:45-10:00 Coffee break

10:00-11:00 HIV treatment: How to start, how to continue? PIs in efficient therapeutic regimens – *Prof. Dr. Jose R. Arribas, Spain, Prof. Dr. Adrian Streinu-Cercel*

11:00-12:10 Vaccines and the use of vaccines in infectious diseases prophylaxis

11.00-11.30 Prevention of pneumococcal meningitis – *Prof. Dr. Sorin Rugină*
11.30-12.00 Flu – a public health problem – *Assoc. Prof. Dr. Victoria Aramă*
12.00-12.10 Is Seasonal Influenza Vaccine Effective? Results of three Romanian I-MOVE Case-control Studies, 2008-2012 – *Daniela Piţigoi*

12:10-12:30 Infections linked to implanted foreign bodies: new ways to optimize the diagnosis and treatment options

Raluca Mihăilescu – Update in diagnostic options: Sonication.
The center for Excellence for the management of infections on prosthetic materials

Moderator: Prof. Dr. Adrian Streinu-Cercel, Assoc. Prof. Dr. Victoria Aramă, Prof. Dr. Olga Dorobăţ, Dr. Daniela Tălăpan

12:30-13:15 NNRTIs for an efficient therapeutic regimen – *Prof. Dr. Anton Pozniak, UK, Prof. Dr. Adrian Streinu-Cercel*

13:15-14:30 Lunch

13:15 Poster Sessions – Poster Area

14:30-15:40 Session 8. Treatment of infections with Gram-negative bacilli

Keynote speaker lecture: *Assoc. Prof. Dr. Adriana Hristea*
Valeriu Gheorghiţă – Pseudomonas aeruginosa Bacteremia and Risk of Death: is Thrombocytopenia an Indicative Factor for Them?
Angelica Vişan – Severe Infections with *Pseudomonas aeruginosa* in Children – Clinical Particularities and Therapeutic Modalities
Daniela Tălăpan – Bacteria Isolated from Blood Culture and their Antibiotic Resistance Pattern
Egidia Miftode – Sepsis in Diabetic Patients: Microbiologic Particularities
Adriana Slavcovici – Antimicrobial Resistance Trends in Gram-negative Sepsis and the Impact on Antibiotic Consumption
Q&A

Moderator: Assoc. Prof. Dr. Adriana Hristea, Assoc. Prof Dr. Gabriel Popescu

15:40-16:00 Clinical challenges in neuroborreliosis diagnosis. **Update** – *Dr Ana-Maria Petrescu*

16:00-17:00 State of the art in neuroborreliosis/Lyme disease

Diagnostic novelties of chronic Lyme/Neuroborreliosis – *Dr. Armin Schwarzbach, Germany*
Therapeutical standards of chronic Lyme disease – *Dr. Carsten Nicolaus, Germany*

17:00-17:15 Coffee break

17:15-19:00 Recent highlights from the literature regarding viral hepatitis

17:15-17:45 Raising to the challenge – maintaining long-term undetectable HIV-RNA – *Prof. Dr. Adrian Streinu-Cercel*
17:45-18:15 The management of long-term therapy in HBV infections – from optimization to continuous optimization – *Lect. Dr. Anca Streinu-Cercel*
18:15:19:00 The management of the HCV infected patient undergoing DAAs therapy – *Prof. Dr. Vlad Ratziu, France, Lect. Dr. Anca Streinu-Cercel*

19:00-19:15 Closing session – *Prof. Dr. Adrian Streinu-Cercel*

Hall B

08:30-9:45 Session 7. Viral hepatitis: new concepts and new treatment options

Valeriu Gheorghiţă – Use of Quantitative Serum HBsAg for Optimization of Therapy in Chronic Hepatitis B Patients Treated with Peginterferon alfa-2a: Prediction and Response Guided Therapy
Cristina Popescu – Pegylated Interferon and Ribavirin Therapy – The Importance of Non-hematologic Side Effects Monitoring
Mihai Lazăr – Ultrasound Evaluation in Patients with Chronic Hepatitis
Iulian Diaconescu – Active Diagnosis of Chronic Hepatitis C – Cost/Effectiveness Ratio
Manuela Arbune – Particularities of HBV-HIV Co-infection in the Youth from Galaţi
Mihnea Hurmuzache – Peginterferon Induced Severe Neutropenia and Treatment with Filgrastim in Patients with Chronic B or C Hepatitis – Case Reports
Laura Iliescu – Triple Therapy in HCV Infection
Q&A

Moderator: Prof. Dr. Dumitru Cârstina, Prof. Dr. Carmen Dorobăţ, Assoc. Prof. Dr. Florin Căruntu

14:30-15:40 Session 9. New diagnostic and treatment options in pediatric infections and pregnancy

Gheorghiță Jugulete – Meningococcal Sepsis in Children – Clinical Forms and Evolution
Luminița Marin – Characteristics of Rotavirus Gastroenteritis in Hospitalized Children in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest
Anca Drăgănescu – Intraorbital Abscess with *Scedosporium apiospermum* in a Healthy Child
Angelica Vişan – Varicellous Encephalitis with Fatal Evolution in a Child with Inaugural Diabetic Ketoacidosis
Mihaela Panduru – Antibiotherapy in the First Year of Life and Atopic Dermatitis – Study on Romanian Population
Cristina Popescu – Sepsis with *Listeria monocytogenes* during Pregnancy
Carmen Georgescu – The HPV-positive Pregnant Woman – High Obstetrical Risk
Q&A

Moderator: Assoc. Prof. Dr. Monica Luminos, Assoc. Prof. Dr. Carmen Chiriac, Prof. Dr. Petre Iacob Calistru

SESSION 1. HIV/AIDS in Romania: past, present, future

Oral presentations

New Candidates for HIV Infections in Romania

Simona Erşcoiu[1], Ionuţ Popa[2], Denisa Stroie[2], Aurelia Bumbu[2], Graţiela Ţârdei[2], Camelia Ionescu[2], Camelia Sultana[3], Maria Nica[2], Simona Ruţă[3], Emanoil Ceauşu[1]

1) Carol Davila University of Medicine and Pharmacy, Bucharest, Romania; 2) Clinical Hospital of Infectious and Tropical Diseases "Dr. Victor Babeş", Bucharest, Romania; 3) Ştefan S. Nicolau Institute of Virology, Bucharest, Romania

Background. In our country, the first case of human immunodeficiency virus (HIV) infection was diagnosed in 1985 as GRID (gay-related immune deficiency). Subsequently, the main route of transmission was heterosexual. Since 2007, new candidates for HIV infection have been described: men who have sex with men (MSM) and intravenous drug users (IVDU). Currently, in Bucharest, there are more than 20,000 IVDU. The occurrence of new legal drugs, the so called "ethnobotanical drugs", together with the illicit drugs (such as heroin, cocaine) led to a dramatic increase of IVDU.
The objective of this study was the assessment of HIV prevalence, the epidemiological aspects, demographic data, social and occupational status, type of drug administered intravenously, type of viral and bacterial coinfections, particular to IVDU.
Methods. We report a retrospective study of IVDU admitted in our clinic from January 2007 to June 2012. We performed a detailed analysis of 75 IVDU cases diagnosed in this time span.
Results. There were 558 IVDU, 193 being HIV positive. In the detailed period, there were 78 IVDU coinfected with HIV and hepatitis C virus (HCV). Methicillin-sensitive *Staphylococcus aureus* (MSSA) infections were diagnosed in 91.74% of patients, 3/4 of them with cutaneous and pulmonary infections, 1/3 with tricuspid endocarditis and a few of them with sepsis. Other diagnosed infections were tuberculosis or other opportunistic infections. Half of the IVDU had been recently infected with HIV. Only five patients are still on antiretroviral treatment. We recorded six deaths.
Conclusion. The profile for the new candidates for HIV infection is: urban male with a mean age of 29 years, not married, with or without primary or secondary education, without occupation, consumer of heroin (long use, with an average of five years) and ethnobotanical drugs (for about one year). The etiology is dominated by HCV and MSSA infections, psychiatric and affective disorders and abstinence manifestations.

HPV/HIV Coinfection. Current Phase Results

Mihai Mitran, Marcel Moisa, Doru Pană, Carmen Georgescu, Sorin Puia

Clinical Hospital of Obstetrics and Gynecology "Prof. Dr. Panait Sîrbu", Bucharest, Romania

Background. The current study aims at demonstrating the special susceptibility and incidence of human papillomavirus (HPV) infection in HIV positive patients, where HPV can be considered an opportunistic infection within the context of HIV infection, both influencing and potentiating each other. Since 1992, the Clinical Hospital of Obstetrics and Gynecology "Prof. Dr. Panait Sîrbu" Bucharest has been the medical unit to consult, record and monitor pregnancies, births and miscarriages associated with transmittable diseases – including HIV positive patients – from Bucharest, as it has the necessary professional expertise and intrahospital networks.
Method. The period under study is 2008 - 2011, the cohort comprised 117 gynopathic patients, selected out of a total of 346 obstetrical and gynecological consultations of HIV positive patients.
Results. For 37 of these patients an HPV-DNA test was done with patterns (31.62%). In 29 of the tested cases, HPV was present, and for the HPV positive, 21 tests signaled the presence of one or more highly oncogenic HPV strains (17.94% of the cohort). The Pap smear was performed in all 117 cases. Clinically, those patients presented a wide range of colposcopic lesions, from different degrees of cervical dysplasia to cervical karyokinesis, undoubtedly as a result of HPV oncogenic involvement. We present the therapeutic modalities used, according to the stage and spread of the cervical lesion.
Conclusion. The study reinforces the data in the international literature considering that there is a relationship and reciprocal potentiation between HIV and HPV. The result is an HPV-induced cervical tumor pathology with a higher incidence, a more accelerated progression and a higher relapse rate in HIV positive women than in the rest of the female population, who is HIV negative. It is worth mentioning that the treatment for the HPV-induced pathology does not require the interruption or alteration of the antiretroviral treatment for HIV infection.

Molecular Modeling of Unliganded and Glycosylated Structures of HIV-1 Gp120 Trimers

Dan Florin Mihăilescu, Octavian Calborean, Maria Mernea

Department of Anatomy, Animal Physiology and Biophysics, Faculty of Biology, University of Bucharest, Romania

Background. HIV-1 entry into lymphocytes starts with the binding of its surface trimeric glycoprotein gp120 to CD4 cellular receptors and then to CCR5 or CXCR4 co-receptors. The design of anti-HIV-1 inhibitors and vaccines targeting gp120 requires knowledge of its full unliganded structure. The monomers' orientation in the unliganded trimer was determined by cryo-electron tomography. The experimental structure of monomeric unliganded gp120 does not include V1/V2 and V3 loops or the complete C1 and C5 domains. Other partial gp120 structures belong to different strains and are CD4- and/or antibody-bound.
Our goal was building of complete 3D models of unbound trimeric gp120 glycoproteins corresponding to 100 HIV-1 strains using the experimental partial structures and the gp120 trimerization data.
Methods. The modeling involved protein structural homology using symmetry constraints between the monomers. Three copies of the

HIV-1 unliganded gp120 structure (protein data bank ID: 3TGT) oriented according to the experimentally determined trimerization mode were used as templates, along with other partial gp120 structures. N-glycosylations were added according to experimental data.
Results. The generated trimeric models include every amino acid and glycosylation of mature gp120. The trimers' packing is close in every model. The amino acids and glycosylations of V1/V2 loops touch the C1 domain of the neighboring monomers and promote the packing.
Conclusion. The models do not present deformations or sterical overlaps, and have the same secondary structures as the templates. The models are useful in the study of gp120 epitopes from different strains and vaccine and inhibitor design.

Interleukin-6 and Tumor Necrosis Factor-Alpha Patterns in a Cohort of HIV-1 Positive Patients undergoing Retroviral Therapy

Cătălin Tilişcan[1,2], Ştefan Sorin Aramă[1], Daniela Adriana Ion[1], Victoria Aramă[1,2], Raluca Mihăilescu[2], Daniela Munteanu[2], Ana Maria Tudor[1,2], Ioana Olaru[2], Adriana Hristea[1,2], Mihaela Rădulescu[2], Ruxandra Moroti[1,2], Cristina Popescu[1,2], Violeta Molagic[2], Raluca Năstase[2], Mihai Lazăr[1,2], Loredana Benea[2], Roxana Petre[2], Smaranda Gliga[2], Mihaela Ion[2], Anca Streinu-Cercel[1,2], Viorica Poghirc[2], Raluca Popescu[2], Ligia Ionescu[2], Roxana, Coţofană[2], Adrian Streinu-Cercel[1,2]

1) Carol Davila University of Medicine and Pharmacy, Bucharest, Romania; 2) National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest, Romania

Background. Interleukin-6 (IL-6) and Tumor Necrosis Factor-alpha (TNF-alpha) are important immune regulation cytokines that may influence HIV expression and disease progression. We investigated IL-6 and TNF-alpha patterns associated with viral replication in a cohort of HIV-1 positive Caucasian patients undergoing complex antiretroviral therapy (cART).
Methods. We performed a cross-sectional study in a Caucasian cohort of HIV-1-infected patients attending the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest. The patients had undergone cART for at least six months. Blood samples were tested for: HIV viral load, IL-6 and TNF-alpha. Mann–Whitney–Wilcoxon and T-tests were used for evaluating differences between groups. Linear regression models were fitted to assess the relationship between inflammatory cytokines and clinical and biological variables. Variables with non-parametric distribution were natural log transformed for linear regression analysis.
Results. Eighty-four patients with a median age of 28 years (IQR 22 years) were included in the study. More than half (55.1%) of the patients were males. The median time from HIV diagnosis was 76.0 months and the median time on cART was 69.0 months. Most patients (71.4%) had serum HIV loads below the limit of detection. Median serum values of IL-6 and TNF-alpha were 26.4 pg/mL and 10.7 pg/mL, respectively. Women had significantly lower levels of IL-6 (24.8 vs. 28.4 pg/mL, p=0.04). There were no significant IL-6 or TNF-alpha differences between the groups with persistent and undetectable HIV replication. Taken together, LnIL-6 and LnTNF-alpha were correlated with the time from HIV diagnosis, but not with the time on cART in linear regression analysis (R=0.34, p=0.02), independent of HIV viral load.
Conclusion. We suggest that IL-6 may synergize with TNF-alpha and contribute to persistent immune activation, independent of HIV virologic suppression.
Acknowledgment. The study was funded by the National Authority for Scientific Research (Grant No. 62077/2008, 2008-2011).

Prevention of HIV Infection through Materno-Fetal Transmission, an European Challenge

Mariana Mărdărescu[1], Adrian Streinu-Cercel[1,2]

1) National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest, Romania; 2) Carol Davila University of Medicine and Pharmacy, Bucharest, Romania

Background. In Europe women account for approximately one third in the number of new HIV diagnosed cases, most of them through unsafe heterosexual contact. Romania is known to have the largest share of long term survivors and new diagnosed cases in women between 20-24 years.
The increase of heterosexual infections determines an accretion in the delivery rates in HIV positive women. This entails prevention programs and the acceptance of antiretroviral therapy as prophylaxis in any country, regardless of its socio-economical development.
Methods. We assessed the dynamic of HIV transmission trends in the female population of fertile age, in Europe versus Romania. We also evaluated the rate of mother-to-child transmission in view of delivering "Zero new HIV mother-to-child infections by 2015", as proposed by UNAIDS in 2011.
Results. Rates of heterosexual transmission in women differ from 73.9% in Western Europe to 58.9% in Central Europe and 60.7% in Eastern Europe. In Romania, at the end of 2011, 61% of newly diagnosed cases were associated with unsafe heterosexual contact, almost half of them being women.
Conclusion. We can improve the way we perceive the situation of HIV positive women by making a joint effort of surveillance and a standardized analysis of this phenomenon within the European space. Also, we must raise awareness that through an individualized care for these patients, with social and institutional support, we can answer their and others' needs.

Special Considerations on Children Exposed Perinatally to HIV in Romania. Psycho-socio-economic Implications

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Background. In Romania, the number of children to HIV positive mothers has increased during the last years due to the fact that female patients from the 1990s cohort have reached a fertile age and due to new cases of women infected sexually or by use of intravenous drugs.
Case report. The first case describes a one and a half year-old old boy, to HIV positive parents, therapeutically multi-experienced, who at birth was found with mixed gonadal dysgenesis, surgically corrected to become a boy, currently seroreverter.
The second case presents a one year old male patient whose mother was diagnosed HIV positive before delivery. The child was confirmed HIV positive postnatally and is currently receiving ART. Clinically, he presents macrocephaly and moderate neuromotor delay.
Conclusion. Children to HIV positive mothers represent an important problem for the medical system, consequently raising concerns socially and economically. It is difficult but highly necessary to consider the evolution over time of seroreverter children whose genitors had been infected for over 20 years and experienced multiple therapeutic regimens. An equal consideration must be offered to vertically-infected children with associated pathologies. Children perinatally exposed to HIV are the milestone of a multidisciplinary team, due to the long follow-up period they require, which in turn carries a great effort of human and material resources.

Neurocognitive Screening with Neuropsychological Tests in HIV Patients

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Background. HIV associated with neurocognitive disorders represents a daily challenge for doctors, who do their best to help these patients. The high incidence of HIV associated with neurocognitive disorders deems the need for a neuropsychological screening of these patients. The present paper represents a study in progress, at the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest, from July to December 2012, evaluating neurocognitive disorders and emotional ones such as depression.
Methods. We used the following neuropsychological tests: Simioni Questionnaire, Montreal Cognitive Assessment, Hamilton Depression Scale, PAOFI Score, International HIV Dementia Scale. Doctors also filled out medical information about the patients, such as opportunistic infections, hepatitis C assessment, treatment adherence and ARV penetrability score.
Results. Since July 2012 we have evaluated 11 patients, out of which 10 are on antiretroviral (ARV) treatment and one of them has not had any ARV treatment yet. Two of the patients are ex-drug users. The neuropsychological evaluation identified five patients with neurocognitive deficit and depression and three with depressive mood but without neurocognitive deficit. The penetrability score has ranged between three and eight.
Conclusion. The results of these neuropsychological evaluations can lead to further neurological and imagistic investigations and also to changing ARV treatments with others that have a higher penetrability score.
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Infectious Diseases and Social Stigma

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Background. Accounting historical facts: the leprosy, plague, and tuberculosis represented stigma examples; during our times, public health problems such as: the HIV/AIDS infection, sexually-transmitted diseases (STDs), viral chronic hepatitis, or tuberculosis, imply a certain degree of stigma, mainly for the regions where the essential human rights are a wish rather than a reality.
The current task of this study is to examine, on scientific grounds, the reality of stigma for infectious and potentially contagious persons, in terms of the existing efficient treatment and prophylactic measures, focused on Romania's prevalent chronic infectious pathology: chronic viral hepatitis and the HIV/AIDS infection. The study also aims to identify feasible and efficient solutions in order to decrease the stigma risk.
Methods. I performed an analysis, based upon reliable specialized sources, concerning the impact the HIV/AIDS infection, and chronic B and C hepatitis, both as national public health problems and on the individual level using the existing data from the "Romanian HIV/AIDS Division of Monitoring and Evaluation" and the opportunity that the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest, is a center of Excellency for chronic viral hepatitis. I critically appraised: infection sources, ways of transmission, pathogenesis, treatment and prophylaxis modalities as well as the existing legislation.
Results. From this analysis it has been ascertained that a certain degree of social ignorance is still present, mainly due to the sanitary education deficiencies regarding the transmission of these diseases, therefore, even for the conventional relationship regarding these patients some degree of hesitation, frequently unjustified, is still present, inducing an undeclared but real social stigma. Our country's legislation corresponds to the European standards, and is quite permissive regarding these patients, offering equal medical service accessibility conditions, free prophylaxis and therapy, confidentiality and social contribution. The identified solutions in order to lower the social isolation risks were: increasing the medical education rank regarding those diseases, informing the sick persons on their legal rights and duties, not only by specialized psychological consult, but also by the creation of informing and socializing clubs for those patients.
Conclusion. From a medico-social point of view, those patients' diseases usually have a chronic, insidious evolution, not being clinically expressed clearly as a stigma, until a certain point; therefore a large share of patients simulate normality status or even neglect the diseases. I must emphasize that those patients do not present a danger for the conventional interpersonal relations, although they could constitute an infection source in the case of intimate contacts or for the activities that could involve continuity solutions (e.g. military, operation settings, medical field, persons that look after children).

Social Factors Influencing the Emotional Balance of HIV Positive Women

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Background. The share of discordant couples exceeds the number of couples where both partners are HIV positive. In most cases, the woman is the HIV infected partner while the man is HIV negative.
HIV infected women plan, just like all other women, to have a family, especially a child. This situation entails a series of psychological and social problems, connected to stigma, diagnosis disclosure and to ARV treatment adherence.
Method. We performed a case-study.
Conclusion. The approach to these couples relies on educating them regarding the reduction of HIV infection transmission first to their partners and then to their child.

Poster presentations

Subclinical Atherosclerosis in Young Persons Horizontally Infected with HIV-1 during Infancy

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Background. Early diagnosis of atherosclerosis remains a challenge for young HIV infected people and further efforts are to be made for implementing strategy for primary prevention.
Our objectives were to evaluate subclinical atherosclerosis and identify the cardiovascular risk (CVR) profile in young adults horizontally infected with HIV-1 during infancy.
Methods. Prospective randomized study, between 31.12.2009 and 30.06.2010 on 56 parenterally HIV infected persons (HIP), following antiretroviral therapy (ART), under the surveillance of the HIV/AIDS Craiova Regional Center. The variables followed were: clinical data, CVR factors, metabolic, immunological, virological parameters, inflammation markers (high-sensitivity C reactive protein – hs-CRP), carotid intima-media thickness (IMT). Twenty-six HIV-seronegative young adults were assigned as control group (CG) for metabolic parameters, hs-CRP and IMT.
Results. The average age was 20.82±1.1 years, 47 HIP (83.93%) classified as AIDS, 26 HIP (46.43%) with CD4>500 cells/cmm, 40 HIP (71.43%) with undetectable HIV-RNA when evaluated, the average ART duration was 9.09±3.2 years, average ART regimens: 3.2±1.63, 40 HIP (71.43%) experienced to protease inhibitors (PIs). In HIP, hs-CRP was 2.17 mg/L, equivalent with a moderate CVR, statistically different compared with CG ($p<0.0001$); IMT was 0.76±0.12 mm in HIP vs. 0.6±0.11 mm in CG. We identified direct correlations between hs-CRP erythrocyte sedimentation rate (ESR) ($p=0.04$), PIs exposure ($p=0.007$), IMT ($p=0.000$), HIV-RNA ($p=0.000$) and between IMT – triglycerides ($p=0.004$), PIs exposure ($p=0.004$), CD8+ ($p=0.0000$), HIV-RNA ($p=0.001$).
Conclusion. Young HIP had an average value of hs-CRP equivalent with a moderate CVR; the CVR profile in young people infected with HIV-1 during infancy includes elevated triglycerides, ESR, CD8+, HIV-RNA and exposure to PIs.

Postpartum Evolution of Newborns to Mothers Addicted to Drugs and Recently Diagnosed with HIV Infection

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Currently in Romania the number of drug-addicted pregnant women is unknown as well as the number of newborns with addiction or deceased due to drugs in their blood. The increasing number of drug-using mothers is directly proportional with the rising number of ethnobotanical drug users.
In maternities from Bucharest about 0.4% of newborns present withdrawal syndrome caused by the consumption of drugs by their mothers during pregnancy; of them at least two children are discovered every month with withdrawal syndrome caused by ethnobotanical drugs used by the mother until the last day of pregnancy. Lately, special considerations have been given to newborns to HIV positive mothers (usually diagnosed at delivery) who also consume ethnobotanical substances.
The drugs the mother uses reach the blood of the fetus through the umbilical cord. Severe withdrawal syndrome occurs from the first hours of life, and it can sometimes be life-threatening (tremor, abnormal screaming, convulsions, severe respiratory and cardiac rhythm irregularity, lethargy and cyanosis).
We present of four clinical cases of newborns to mothers who use drugs and/or ethnobotanical substances, perinatally exposed to HIV infection.
Newborns to mothers using drugs and ethnobotanical substances, perinatally exposed to HIV infection, usually associated with hepatitis B, C and with syphilis represent a new challenge for the pediatrician-infectionist team.
Most of these women, consumers of illicit and/or ethnobotanical drugs are not in the records of public health services and are diagnosed late with HIV infection, with a heavy impact on the newborn's health.

Management of the HIV-infected Patient – a Continuous Challenge

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Background. In the era of highly active antiretroviral therapy (HAART), patients infected with human immunodeficiency virus (HIV) confront with a diverse and complex pathology, imposing interdisciplinary collaboration.
Case report. We present the case of a 23 year-old female patient, with a 10-year history of HIV infection and antiretroviral therapy, staged C3 (CD4 T-cells count 4/cmm), diagnosed in 2008 with osteomalacia and osteonecrosis of the femoral head, at present with bilateral hip prosthesis. In May 2012 she was diagnosed with secondary pulmonary tuberculosis of the upper right and inferior left lobes. Tuberculostatic treatment was initiated, with isoniazid, rifampicin, ethambutol, amikacin. Following two months of associated tuberculostatic and adapted antiretroviral treatment (abacavir + lamivudine + raltegravir), the patient complains of pain in her knees and tarsometatarsal joints, associated with signs of inflammation and movement deficiency.
Complex endocrinological investigations, joint X-ray, orthopedic and rheumatologic examinations excluded the suspicions of tuberculous arthritis, septic arthritis and osteomalacia progression.
Metabolic investigations revealed hyperuricemia, hypercholesterolemia, CD4 T-cells count 550/cmm, undetectable plasma HIV-RNA. An evaluation of the complex antiretroviral and antituberculous treatment recognized hyperuricemia and associated arthritis as adverse events – ethambutol-induced pseudogout. We interrupted ethambutol administration and initiated allopurinol, with favorable outcome. The extended antibiogram of the *Mycobacterium tuberculosis* strain revealed multidrug resistance (MDR).
Conclusion. HAART increased life expectancy, but brought in new pathology, implying complex diagnostic and therapeutic issues.

Non-typhi *Salmonella* Sepsis in HIV Infected Late Presenter Patient

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Background. Septicemia with *Salmonella* spp. is considered the defining disease of AIDS. In the highly active antiretroviral therapy (HAART) era the frequency of infection decreased under 1%.
Case report. A 36 year-old patient was diagnosed with HIV-TB coinfection in March 2011. He was admitted to the Infectious Diseases Clinic I, Târgu-Mureş in April 2011 for persistent febrile syndrome under the specific therapy. Physical examination on admission: wasting syndrome, body mass index (BMI) 15.2, altered general condition, fever (38.8°C), oral thrush, bilateral increased breath sounds, tachycardia, tachypnea, hypotension, abdominal distension, fast bowel movements. Laboratory tests revealed severe anemia, leukopenia, altered liver tests and hypoproteinemia. Blood culture was positive for group D non-typhi *Salmonella* spp. sensitive to common antibiotics; pharyngeal exudate revealed *Candida* spp; reactive HBsAg, CD4 count 88/µL.
Based on the clinical and paraclinical examination the patient was diagnosed with HIV infection stage C3, sepsis with group D *Salmonella*, pulmonary tuberculosis, chronic HBV hepatitis, oral candidiasis, wasting syndrome. Under antibiotic therapy with ceftriaxone, ciprofloxacin, antimycotic, antiretroviral (abacavir/ lamivudine, efavirenz), tuberculostatic treatment, anticoagulant, the evolution was favorable. Subsequently, the patient was non-adherent to antiretroviral and tuberculostatic medication, and he was readmitted twice without recurrence of sepsis. The patient received primary prophylaxis for *Pneumocystis* pneumonia (PCP) with trimethoprim-sulfamethoxazole. The tuberculosis proved to be multidrug resistant and the patient died in September.
Conclusion. Sepsis with *Salmonella* spp. evolved favorably under antibiotic therapy without recurrence, but the lack of adherence to the therapy of comorbidities led to the patient's death.

Long-term Survival of a Patient with Disseminated *Mycobacterium* spp. Infection in Advanced AIDS

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Background. Patients with advanced AIDS are at high risk of developing numerous opportunistic infections, among which *Mycobacterium avium* complex (MAC). MAC infections may become severe in such patients, the risk of developing disseminated disease being proportional to the immunosuppression degree.
Given the nonspecific symptoms compared to other opportunistic infections, diagnosis of MAC infection requires a high index of suspicion.
Effective therapy of disseminated MAC infection includes at least 2 active drugs.
In patients with advanced AIDS (CD4 <50 cells/cmm), MAC prophylaxis and antiretroviral therapy may decrease the risk of developing disseminated mycobacterial infection.
Case report. We present the case of a patient with advanced AIDS (CD4 <50 cells/cmm) which had discontinued antiretroviral therapy through non-adherence and developed disseminated mycobacterial infection.
This severely immunocompromised patient has not received antiretroviral and antimycobacterial therapy for ten months after harvesting blood cultures in which *Mycobacterium* had been observed growing. Although the patient did not continue periodic checks for medical care, she managed to survive with a Karnofsky index of 80%.

Postpartum Cerebral Toxoplasmosis in an HIV-positive Late Presenter Patient

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Background. Toxoplasmosis is a common opportunistic infection detected in HIV patients when the CD4 count drops below 100/cmm in the absence of primary prevention. Cerebral toxoplasmosis may manifest clinically with headache, motor deficits, seizures. Seropositive patients should be screened for anti-*Toxoplasma gondii* IgG.
Case report. We present the case of a 23 year-old female patient unattended during pregnancy, diagnosed with HIV infection two weeks before birth, in the 35th week of pregnancy, who presented in confinement after childbirth: paresthesia, left hemibody motor deficit, headache, vomiting and high fever. Brain magnetic resonance imaging (MRI) with contrast showed multiple intracerebral tumors compatible with toxoplasmosis. Other organs (lung, eye) were not afected. Anti-*Toxoplasma gondii* IgG were detected at increased titers and IgM was undetectable. Therapy was instituted with high-dose trimethoprim-sulfamethoxazole and azithromycin for 6 weeks, together with corticosteroids and molar solutions of NaCl for syndrome of inappropriate antidiuretic hormone secretion (SIADH).
The evolution was slowly favorable with clinical improvement and regression of lesions on brain MRI at one month and three months after diagnosis. We mention persistent left hemiparesis, predominantly brachial.
In this case, the HIV detection was late, advanced immunodepression being aggravated by pregnancy, a trigger for opportunistic infections.
Conclusion. The improvement of symptoms with the regression of intracerebral lesions showed that applying a correct antiretroviral therapy associated with etiological treatment of opportunistic infections can be successful even in severe immunodeficiency states.

The Prevalence of Neuro-TB in HIV Patients – a Clinical Study Jan 2002-Dec 2011

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Background. Tuberculous meningitis (TBM) is the most severe form of TB. HIV-infected individuals have a high risk for all forms of extrapulmonary tuberculosis, including tuberculous meningitis. This risk is increased at more advanced levels of immunosuppression. Furthermore, most observational studies of TBM have found that coinfection with HIV is associated with an increased risk of mortality. Prevention, early recognition, diagnosis and treatment are fundamental to improving outcomes. Despite treatment, mortality and long-term disability remain unacceptably high.
The dual infection of human immunodeficiency virus (HIV) and neurotuberculosis is an important cause of morbidity and mortality. The purpose of the study was to reveal the prevalence of neuro-TB in ten years period in HIV-infected patients admitted in the Infectious Diseases Hospital "Sf. Parascheva", Iaşi,

Methods. We conducted a retrospective study using the files of HIV infected patients who developed in their clinical history a TB encephalomeningitis. Medical records were reviewed to determine patient demographic and clinical characteristics as well as paraclinical parameters such as the level of CD4 lymphocyte cell count and (CSF) microscopy and culture.
Results. In the mentioned period 6908 HIV infected patients were admitted, of which 28 with neurotuberculosis (0.40%). The statistical analysis revealed the predominance of male patients (18/28) and the urban area (17/28). Half of the patients were born during the 1987-1990 period.
Lumbar puncture at admission revealed a cellularity between 14-2300 elements/cmm, with elevated albumin levels in CSF in all cases. The bacterioscopy was negative.
The culture was positive for Koch bacillus in 6 cases (21.42%).
Pulmonary tuberculosis was noticed in 13 patients (46.42%).
The CD4 lymphocyte cell count was 178 cells/cmm in average and varied between 1-652 cells/cmm.
The anti-TB therapy consisted in quadruple therapy for all the cases.
Eleven out of 28 patients died (39.28%).
Conclusion. TB meningitis is difficult to manage in HIV-infected patients with severe immunodeficiency, leading to an overwhelming mortality (one third of the cases) regardless of the anti-TB treatment.

Quality of Life in HIV/AIDS Patients

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Background. Quality of life in patients with HIV/AIDS has been significantly improved by the advent of highly active antiretroviral therapy (HAART), but it still remains below the level of the general population. The objective of this study was the assessment of quality of life and its influencing factors in multi-experienced HIV/AIDS patients.
Methods. We included 60 patients with HIV/AIDS known for at least 10 years, multi-experienced, and 20 other persons from the general population of the same age group.
The study was conducted as a structured interview, with standardized questionnaires on the quality of life, fatigue, pain, general symptoms, depression, and adherence to antiretroviral medication.
Results. At a threshold of 80 points on the SF-36 scale, the share of people with impaired quality of life was three times higher than in the control group (OR=4.93, p=0.01).
Poor quality of life was correlated with pain severity (r^2=0.17, p=0.00007), with fatigue severity (r^2=0.51, p <0.0001), and with the presence of depression (RR=2.82, p=0.0001). In the control group, we found one case depression associated with impaired quality of life, and only infrequent mild pain. The presence of fatigue was significantly higher in people with HIV/AIDS than in the control group.
Unlike literature, we found a significant negative relationship between viral load and quality of life (r^2=0.21, p=0.0019). CD4 count was also correlated with the quality of life score.
An association was found between antiretroviral adherence and quality of life, good adherence to treatment being two times more frequent in patients with better quality of life (OR=4.68, p=0.005).
Conclusion. Besides etiopathogenic treatment, proper management of pain and depression along with identification and proper treatment of fatigue can lead to improved quality of life for people living with HIV/AIDS and can increase antiretroviral adherence.

Newly Diagnosed HIV Infections in the Cluj anti-AIDS Center in the Last Four Years. Epidemiological, Clinical and Biological Features

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Background. There are 33 million people worldwide living with HIV, the overall prevalence being 0.8%. In Romania there are 9475 people living with HIV, with a prevalence of 0.1%.
There are an increasing number of cases transmitted parenterally in the intravenous drug users, which are associated with hepatitis viruses B/D or C (HBV/HDV, HCV). Many patients are symptomatic, and with CD4 cell counts below 350/cmm (late presenters).
We aimed to analyze the epidemiological, clinical and biological issues in the anti-AIDS Center of Cluj in the last four years.
Methods. We performed a retrospective analysis of medical records of patients admitted between 01.01.2009-01.09.2012. We studied gender, mode of transmission, symptoms at diagnosis and clinical course, CD4 cell count, HIV viral load, HBV/HDV and HCV confections, counties of origin. We formed two groups: group I with patients during 2009-2010 and group II from 2011-2012. We used Fisher's exact test; we considered a p-value<0.05 to be statistically significant.
Results. Out of the 106 patients analyzed, we included 49 patients in group I and 57 in group II. Values for group I/group II were: age 35/34 years, female patients 18/15, STD 44/55, asymptomatic 15/22, severe symptoms 24/15, deaths 7/4, mean CD4 cell count 327/379/cmm, HIV-RNA 808,595/463,258 copies/mL, HBV coinfections 5/0, HCV coinfections 3/1, patients in Cluj county 18/18. Statistically significant differences, were HBV coinfection (p=0.01) and severe symptoms in group I (p=0.02).
Conclusion. In the Cluj anti-AIDS Center, in the last 4 years there has been a gradual increase in the number of cases; the majority, 92.5% are sexually transmitted infection. Severe symptoms and late presenters were recorded in 2009-2010, but not in the last two years. Active detection has gained ground over the last two years, which is an important step for early treatment and HIV prevention.

Pseudotumoral Pulmonary Involvement in Two HIV Positive Patients

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Background. Pulmonary inflammatory pseudotumor (PIP) is a rare disease that occurs more frequently in younger patients. It is still debated whether this is an inflammatory lesion characterized by uncontrolled cell growth or a true neoplasm.
Case report. We present two cases of HIV positive patients, aged 21 years and 23 years respectively, with CD4<25 cells/cmm, with pulmonary pseudotumoral lesions.
The first case (September 2009) was clinically and radiologically diagnosed with recurrent right pneumonia. Further monitoring raised imaging suspicion of the tumor in the right upper pulmonary lobe. Initially, a tuberculosis consult raised the suspicion of pulmonary tuberculosis and tuberculosis treatment was recommended.

Bronchoalveolar lavage results indicated the absence of tumor cells and ruled out acid-fast bacilli and fungal etiologies. We carried out a positron emission tomography (PET-CT) which suggested metabolic changes consistent with lymphoma (stage II E) with symmetrical clamping of the ganglion stations, upper diaphragm and visceral pulmonary determination. Under these conditions, a biopsy by right thoracotomy through the right upper lobe was performed. The results of histopathological and immunohistochemical examination established the diagnosis of pulmonary inflammatory pseudotumor.
The second patient (June 2012), after seven years of antiretroviral therapy interruption, developed a lung disease with radiological appearance of a well defined, homogeneous, macronodular opacity in the hilum of the right lung. A pulmonary CT confirmed the presence of this lesion and raised the suspicion of lymphoma. Bronchoalveolar lavage results indicated the absence of tumor cells, and ruled out the acid-fast bacilli etiology. We performed a mediastinal node biopsy through Carlens cervical mediastinoscopy. The result of pathological and immunohistochemical examinations highlighted the changes due to an inflammatory pseudotumor.
The clinical and biological evolution of both patients was favorable under highly active antiretroviral therapy (HAART), broad-spectrum antibiotics, and steroidal anti-inflammatory treatment.
Conclusion. Pulmonary pseudotumoral inflammatory lesions in HIV positive patients can have a favorable evolution under antibiotic and anti-inflammatory treatment associated with HAART.

Epidemiological, Clinical, Immunological and Virological Aspects in HIV/AIDS Infected Patients who Initiated Antiretroviral Therapy with First-Line Regimens

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Background. HIV infection is a priority problem for public health in the Republic of Moldova. Late detection of HIV infection and delayed initiation of antiretroviral therapy (ART), determines the more reserved prognosis.
Methods. We followed 72 adult patients diagnosed with HIV infection (average age 36.4 years) who initiated ART in 2011 with first-line regimen (AZT+3TC+EFV), supervised in the Clinical Hospital of Infectious Diseases "T.Ciorbă". Late diagnoses were defined as a CD4 count below 350 cells/µL and/or an AIDS-associated condition.
Results. The route of transmission of infection was 73.6% (53) heterosexual and 26.4% (19) by injecting drug use. Out of the 72 patients who started antiretroviral therapy (ART), 47 (65.3%) were detected late with a number of CD4<350 cells/µL, out of which 18 (38.3%) patients were detected very late with a number of CD4<200 cells/µL. At ART initiation, 13 (18.1%) patients had undetectable HIV-RNA and 17 (23.6%) patients had HIV-RNA>100,000 copies/mL. The most frequent opportunistic infections present at the time of initiation of ART were oropharyngeal candidiasis – 45.8%, pulmonary tuberculosis – 27.8%, Herpes Zoster – 5.6%, wasting syndrome – 4.2%. At detection of HIV infection, 40.3% (29) of the patients were in the following AIDS stages: A3 – 2.8% (2), B3 – 8.3% (6), C1 – 1.4% (1), C2 – 9.7% (7) and C3 – 18.1% (13). At initiation of ART, 62.5% (45) of the investigated patients were classified in the following AIDS stages: A3 – 6.9% (5), B3 – 16.7% (12), C2 – 12.5% (9) and C3 – 26.4% (19). In 12 (16.7%) patients we diagnosed chronic hepatitis C, in 7 (9.7%) patients – chronic hepatitis B, and in 2 (2.8%) patients – chronic hepatitis B+C.
Conclusion. In HIV-infected patients the most frequent clinical manifestations were: oropharyngeal candidiasis, pulmonary tuberculosis, Herpes Zoster, wasting syndrome. Two thirds of the HIV-infected patients were detected late, with the value of CD4 below 350 cells/µL, with or without AIDS-related conditions, fact that leads to the need of improving HIV testing strategies.

Session 2. Aspects of infectious diseases

Oral presentations

The Efficiency of Antiretroviral Therapy (ARVT) in HIV Infected Patients

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Background. The objective of this study was to assess the efficiency of the antiretroviral therapy (ART) in patients infected with HIV who had the level of CD4<10 cells/cmm at the time of ART initiation.
Methods. The research sample comprised of 30 patients with HIV, who met the mentioned criteria. The patients were examined through clinical, immunological (CD4) and virological (HIV-RNA PCR) methods before treatment initiation and over the course of therapy.
Results. Thirty patients infected with HIV with the level of CD4<10 cells/cmm at the time of ART initiation were supervised. Prior to ARV treatment, the average value of CD4 in those patients was 4.5 cells/cmm. All patients had clinical and immunological indications for the initiation of ART, while 56% had virological indications as well.
During first month of therapy three patients died, while 27 continued the antiretroviral treatment, and the average value of CD4 in those patients was 30 cells/cmm.
In the course of the next three months, two more patients died, but the other 25 who continued the ARV treatment had the average value of CD4 equal to 68.3 cells/cmm.
Since the patients started the treatment at different periods of time only one patient has reached five years of treatment at this time; his level of CD4 cells was 2 at the beginning of therapy, while currently this indicator is 420 cells/cmm, and the viral load is undetectable. The other patients continue the ART in the same place.
Conclusion. Although it is not advisable and timely, treatment can be initiated even at very low levels of CD4 cells. There are real chances to rehabilitate the immune system in extremely poor conditions of patients with HIV, and everybody in need must be offered such chances.

Colonization of Patients with Multiresistant Bacteria in Romania: is this the Tip of the Iceberg?

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Background. We assessed the performance of bacteriological screening for colonization with nosocomial multiresistant bacteria (MDRB), in all oncological and surgical patients hospitalized in the "Sf. Constantin" Hospital. This offers the assumption of a strict epidemiological surveillance, allowing limitation of MDRB dissemination and adopting correct measures for prescribing pre-operative antibioprophylaxis.
Method. Before hospital admission, all patients underwent screening for colonization with methicillin-resistant Staphylococcus aureus (MRSA) or Gram-negative bacteria producing extended spectrum beta-lactamases (ESBL). Patients diagnosed as carriers were protected by insulation of "contact" type, and preoperative antibiotic prophylaxis was adapted to the results.
We present the available information on the screening conducted for a total of 950 patients between 10.12.2011 - 10. 09.2012, taking into account the rate and the type of colonization, the presence of risk factors associated to colonization and the data on preoperative prophylaxis, correlated with the bacteriological results obtained pre- or intra-operatively in these patients.
Results. The MRSA colonization rate was 12.7% with a percentage of ESBL-producing strains of 9.7%, below the data existing in the current literature for southeastern Europe. Patients who cumulated complementary risk factors were more open to MDRB colonization than naïve patients.
Preoperative antibiotic prophylaxis predisposed to a decrease in the risk of infectious complications associated to surgery and subsequent comorbidities, with direct impact on the quality and costs of care.
Conclusion. The results reveal the importance of additional studies to determine the true incidence of MDRB colonization in Romania, studies that underpin the elaboration of solid best practice guidelines for the nationwide epidemiological hospital practice.

Antibiotic Resistance of *Neisseria gonorrhoeae*

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Background. The emergence and spread of antibiotic-resistant strains of gonococci represent important public health issues. The aim of the

study was to determine the sensibility of *N gonorrhoeae* to the main antibiotics used for treatment.
Methods. The study was conducted at the "Prof. Dr. Scarlat Longhin" Clinical Hospital for Dermato-Venereology and at the Cantacuzino Institute in Bucharest from July 2010 to December 2011. The diagnosis was established based on direct exam and on cultures. For determining the sensitivity, we used the Kirby-Bauer, E-test and BKP diffusion methods were used.
Results. A total of 26 patients with ages between 15 and 35 years old were included in the study. There were 23 strains (88.4%) of gonococci which showed resistance to at least one antibiotic. All the strains tested were sensitive to ceftriaxone and spectinomycin. Two gonococci strains (7.7%) were resistant to azithromycin, 5 strains (19.2%) were resistant to penicillin and 21 strains (80.8%) were resistant to ciprofloxacin; 13 strains (35.1%) had an intermediate resistance to cefixime. There were 9 (34.6%) beta-lactamase secreting strains detected.
Conclusion. The study highlights the importance of judicious use of antibiotics and the need for using laboratory investigations in the diagnosis of urethritis. In this context it is necessary to create national networks for the surveillance and permanent monitoring of the sensibility to antibiotics of gonococci.

Wound Infections in Elective Resection for Rectal Cancer

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Background. The aim of this study was to analyse the epidemiology of incisional surgical site infection (SSI) in elective resection for rectal cancer.
Methods. Prospective study of elective rectal resections performed at the "Prof. Dr. Ion Chiricuţă" Oncology Institute, Cluj Napoca, between January and December 2011. Incisional SSI was defined as wound infection within 30 days after surgery. The statistical analysis was performed with Epi Info 3.5. The level of statistical significance was $p<0.05$.
Results. A total of 183 elective resections for rectal cancer were performed during the observation period. SSI occurred in 18 patients (9.84%). The SSI rates were 12.0% in rectosigmoid resection, 7.21% in anterior resection and 14.9% in abdominoperineal resection ($p=0.31$). SSI occurred more frequently in rectal resections associated with ostomy formation: RR=5.94; 95% CI [1.42-25.10], $p=0.009$.
Enterococcus faecalis, *Escherichia coli* and *Klebsiella pneumoniae* were the three most frequently isolated pathogens (8 cases, 5 cases and 4 cases, respectively).
The mean hospital stay was higher in patients with SSI (18.4±6.1 days vs. 13.03±4.7 days, $p<0.001$).
Conclusion. The incidence of SSI in patients undergoing elective rectal resection in our study was lower than that generally reported in the literature. There were no significant differences between SSI rates among rectal resection procedures performed. Ostomy formation was a risk factor for SSI in elective rectal surgery. The occurrence of SSI increased the length of hospital stay.

Infectious Complications after Heart Transplant

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Background. Infections, alongside rejection, are the most important causes of morbidity and mortality of the heart transplant recipients. Infections are not independent events, but they depend on the immunological state of the transplant recipient, which in its turn is determined by various factors, the most important being: age at the time of the transplant, gender and immunosuppressive treatment.
The objective of this study was to assess infections that occurred in patients undergoing heart transplantation procedures.
Method. Thirty-seven consecutive patients that underwent orthotopic heart transplant and received immunosuppressive therapy were assessed for a period of 36 months. We noticed post-transplant infections at 1 month, 6 months and 12 months intervals. Correlations were made with the serological tests that were performed on both the donor and the recipient before the transplant (HIV, HBV, HCV, CMV, EBV, *Toxoplasma*, and so on). The diagnosis of viral, bacterial and fungal infections was established based on serological and bacteriological testing.
Results. The patients' age was between 12 and 59 years of age with an average of 38.5 years; 28 patients (75.7%) were male, 9 patients (24.3%) female. In the first 6 months after the transplant the following data were collected: 10 patients developed viral pneumonias, 3 cases of bacterial pneumonias were identified, 2 patients developed pulmonary aspergillosis, 1 patient - tuberculosis; skin and mucous viral, bacterial and fungal infections were observed in 5 patients.
Conclusion. Major complications with lethal potential were seen in patients with tuberculosis and pulmonary aspergillosis. Patients with variously located viral, bacterial and fungal infections showed favorable evolution.

Particularities of Manifestations of *Toxocara* Invasion

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Background. *Toxocara* has become one of the most common parasites in humans; in recent years its incidence has increased. Lasting manifestations caused by *T canis* larvae in humans remain poorly known, while practitioners pay insufficient attention to this parasitosis.
Methods. Prospective and retrospective study analyzing the data on medical history, clinical examination, laboratory data, therapeutic efficacy and supervision of toxocariasis cases in the Republic of Moldova.
Results. We analyzed 500 cases of patients with various manifestations of toxocariasis with complex clinical presentation, over a period of 1-6 years.
The distribution according to age was: children – 19%, adolescents – 6.4%, adults – 69.4% and elderly patients – 4.8%. Thus, the most affected people belong to the working age group (19-59 years).
The forms of systemic disease affecting multiple organs and systems prevailed, with complex action of systemic invasive-allergic type. According to the prevalent type of damage, digestive disorders dominated – 55.4%, followed by respiratory – 49%, allergic dermatitis or other skin manifestations – 43.4%, fatigue or other symptoms of damage to the nervous system – 43.8%. Only in 11% of seropositive adult cases, clinical manifestations were absent.
Conclusion. Invasion of the larvae of *Toxocara canis* is widespread not only among children, but also among adults. Clinical manifestations of *Toxocara* invasion have very diverse character, intensity and evolution, therefore the serological investigation in toxocariasis must be taken into account in clinical guidelines in prolonged gastrointestinal, lung, dermatoallergic, neurological or ocular diseases. The intensity of clinical manifestations is often not in direct correlation with the changes in blood count or the level of anti-*Toxocara* antibodies.

Family Outbreak of Q Fever

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Q fever, caused by *Coxiella burnetii*, is a zoonosis whose incidence in humans is probably much undervalued. Domestic mammals are the main natural reservoir of this germ. Q fever was considered an occupational disease that occurs in farmers, veterinarians, abattoir workers etc., but the percentage of non-occupational cases seems to be close to that of occupational disease; urban epidemics can develop. Inhaling aerosols that are contaminated with *C burnetii* is the most frequent route of transmission in human outbreaks.
Considering the high rate of mild cases, non-specific symptoms and difficulty of confirmation, Q fever is still an underdiagnosed disease in Romania.
According to the confirmed Q fever cases in humans reported to the ECDC during 2007-2008, in Romania there are less than 0.1 cases/100,000 inhabitants, while Slovenia, the Netherlands and Bulgaria are on the top of the list. Unfortunately, as reported by EFSA and literature, there is no information about cases of Q fever in animals in our country.
We report the case of a Q fever family outbreak - father and son, from rural areas, which asserted the existence in the household of sick animals - goats, poultry and pigeons. The father had a clinical history of prolonged fever, while his son developed acute myocarditis, initially considered as an acute coronary syndrome due (clinical picture, ECG and cardiac enzymes).

Diagnostic novelties of chronic Lyme/ Neuroborreliosis

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Background. Currently, the Robert-Koch-Institute, Germany recommends a two-tier step laboratory diagnosis for *Borrelia burgdorferi* antibodies by a screening in form of an ELISA technique, followed by an immunoblot technique in positive or borderline ELISA results.
Critically there is no standardized spectrum of specific antigens for test-producers, which must be used in all tests for *Borrelia* antibodies. On the other hand, an early antibiotic treatment of stage I in Lyme disease could suppress the development of specific *Borrelia*-IgG- and/or IgM-antibodies with the consequence of an isolated production of IgM-antibodies in chronic Lyme disease. Therefore it is known that negative antibody findings in chronic Lyme disease cannot exclude a chronic infection with *Borrelia burgdorferi*.
Methods. We evaluated 50 patients with chronic neurological and musculoskeletal symptoms, who were diagnosed as chronic Lyme disease clinically by an exact anamnesis of all symptoms and the clinical history.
We used commercially available laboratory tests for the antibody detection of *Borrelia burgdorferi* by IgG/IgM-immunoblot (Fa. Euroimmun, Germany) and ELISA technique (Fa. Euroimmun, Fa Diasorin, Fa. Aesku.Diagnostics, all Germany) and a multianalyte technique (Fa. Virion Serion, Germany).
Results. The specificity of all tests was over 92%. The sensitivity of the *Borrelia*-IgG/IgM-immunoblot was 60%, compared with 32% up to 42% for the ELISA techniques, depending on the individual test producer, and 44% for the multianalyte technique.
A negative ELISA screening with a positive result in the immunoblot technique was found in 4% up to 14% and a negative ELISA screening together with a borderline immunoblot result in 12% up to 16% of cases, depending on the individual test-producer.
These results showed a loss of sensitivity by the two-tier test system of 16% up to 28%, depending on the individual test-producer.
We found an isolated persistence of IgM-antibodies in 10% of all chronic infected patients.
Conclusion. This study shows that there is a high specificity of all test-systems for *Borrelia* antibodies in a range over 92%.
But there is no acceptable need for the two-tier step-system because of an exaggerated loss of sensitivity up to 28%. Therefore the more specific immunoblot technique must be used instead of an ELISA screening until all test-producers will do a good standardization of the ELISA techniques with a much better sensitivity.
As long as the immunoblot technique lacks in sensitivity up to 40% as well, other helpful tests like ELISpot Lymphocyte Transformation Test (LTT) and CD57-cells must be used additionally for a higher sensitivity and the control of cellular activity in chronic Lyme disease.

Therapeutical Standards of Chronic Lyme Disease

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Lyme disease is the most common tick-borne disease known in Europe. The main vector is *Ixodes ricinus*. For years, there has been a regular increase in infection rates in the various European countries. Additionally, a significant increase of other tick-borne diseases such as *Ehrlichia*, *Anaplasma*, *Bartonella*, *Babesia* and *Rickettsia* infections have been discovered. Patient are increasingly diagnosed with mixed infections.
If the patient with suspected Lyme disease shows appropriate clinical symptoms and complaints, a differential diagnosis of mixed infections always has to be considered, before a treatment decision is made. This especially applies to patients with chronic conditions. Additionally, the known state of the Lyme infection, as well as coinfections, is important. This also applies to so-called "biofilms".
In the future, we will have to adapt the therapy for patients with chronic forms of Lyme disease and other tick-borne diseases individually. This will be in accordance to our experience and the general treatment recommendations of national and international guidelines of individual medical societies.

Is Seasonal Influenza Vaccine Effective? Results of three Romanian I-MOVE Case-control Studies, 2008-2012

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Background. Romania participated in the ECDC funded I-MOVE multi-centre project from 2008 to 2012 along with other eight European countries, with case-control studies based on the influenza sentinel surveillance network.
These studies aimed to estimate seasonal influenza vaccine effectiveness (IVE) in the elderly (2008-2009) and in all age groups (2010-2011, 2011-2012), against medically-attended influenza-like illness (ILI) laboratory-confirmed for influenza.
Methods. We conducted case-control studies using the test-negative design embedded in the influenza sentinel surveillance system. Cases were ILI laboratory confirmed for influenza. Controls were ILI cases testing negative for any influenza. Data collected included demographic and laboratory information, vaccination status and data on different confounding factors identified in the literature. IVE was

calculated as (1 – odds ratio for vaccination)*100. The 95% confidence interval was calculated around the point estimate. The pandemic season was excluded from the analysis.
Results. In the season 2008-2009, the adjusted IVE was 86.8% (95% CI: 38.0, 97.2). In the season 2010-2011, the adjusted IVE was 83% (95% CI: 23, 96) overall and 70% (95% CI: -54, 94) for A(H1N1)pdm2009. In the season 2011-2012, the adjusted IVE was 42% (95% CI: -295, 92) for influenza A(H3N2) and 40% (95% CI: -534, 94) in the target groups for vaccination.
Conclusion. The results suggested a good protection of the seasonal influenza vaccine in the elderly (season 2008-2009) and in all age groups in the season 2010-2011 and a moderate protection in the season 2011-2012, taking into account the small sample size and the low vaccination coverage.

Poster presentations

Clinical and Epidemiological Features of Hospitalized Acute and Chronic Q Fever in Bucharest – a One-Year Survey

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Background. Q fever is an emerging or re-emerging disease in many countries and a sporadic disease in Romania. In the last years an increased number of cases were reported.
Methods. We conducted a retrospective study of 32 patients hospitalized in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" from November 2010 to October 2011. Acute and chronic Q fever were serologically confirmed by the presence of immunoglobulin M and G antibodies to phase II and phase I *Coxiella burnetii* antigens (by immunofluorescence assay).
Results. The mean age of the patients was 49.09±10.9 years, the highest rate of infection being recorded in the 50 to 69 year-old age groups, with a male:female sex ratio of 1:1. Acute Q fever occurred throughout the year but was more common during the warm season. 84.37% of patients resided in Bucharest and only 4 patients lived in rural areas (p=0.001). The most common clinical presentation was acute febrile disease (mean length of fever was 19.7±13.1 days). Clinically, acute Q fever presented most commonly with both pneumonia and hepatitis (62.5%), followed by pneumonia only (21.87%), hepatitis only (9.37%) and endocarditis plus hepatitis (6.25%). 71.87% of patients had inflammatory syndrome. The delay between hospitalization and treatment with doxycycline varied between zero and 22 days, with a mean time to doxycycline start of 13.5 days. 8 patients were started on doxycycline on admission. 7 patients received fluoroquinolones on admission but 5 of them continued to have fever and necessitated doxycycline. Only 2 patients had a favorable outcome with fluoroquinolones treatment.
Conclusion. *Coxiella burnetii* infection should be considered in patients with lung and liver involvement, even if they lived in urban area. Doxycycline as first line therapy in patients with community acquired pneumonia has the advantage of rickettsial coverage.

Administration of Antibiotics in Pregnancy and First Year of Life and the Risk of Atopic Dermatitis - Meta-analysis of Observational Studies

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Atopic dermatitis (AD) represents a disease whose incidence is continuously increasing. A possible cause of the disease may be the early exposure to antibiotics, but the studies carried out up to present have contradictory conclusions. The purpose of this work is to carry out a meta-analysis of the studies existent in the literature regarding administration of antibiotics in developing AD.
We carried out an extensive search in the international databases and we identified 110 articles which analyzed the role of early exposure to antibiotics in the occurrence of atopic dermatitis. In the final meta-analysis we included 12 articles which comprised, in all, 10,951 subjects. The meta-analysis of the studies, independent of the moment of application of antibiotic treatment, has suggested that the administration of antibiotics generally is not a risk factor for AD (OR=1.07, CI: 0.97-1.19, p=0.19). The subgroups analysis suggested that their administration during pregnancy increases the risk for occurrence of atopic dermatitis in newborns (OR=1.3; CI: 1.01-1.66, p=0.04).
In conclusion, the use of antibiotics during pregnancy seems to increase the occurrence of atopic dermatitis in newborn children.

Cardiac Damage in Systemic Infection. Clinical and Therapeutic Correlations

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Background. Sepsis – a medical condition with lethal potential – characterizes an inflammatory status of the whole body with the presence of a source of infection known or suspected, affecting around 18 million people worldwide, with a mortality rate up to 28%. In sepsis with endocardial damage, the primary breeding ground for infectious germs is the endocardium, determining severe cardiac lesions or the aggravation of the existent ones.
Methods. We have carried out a retrospective study using epidemiologic, clinical, paraclinical and therapeutic data of patients diagnosed with sepsis with endocardial damage, hospitalized in the Infectious Diseases Hospital "Sf. Parascheva" Iaşi, between January 1, 2008 and August 31, 2012. Criteria of circumscription to sepsis, as well as the Duke criteria specific to infective endocarditis diagnosis were assessed.
Results. Positive diagnosis for sepsis with endocardial damage was established in 62 patients. The most affected age group was 38-67 years. Clinically, fever syndrome was registered in 56 patients. Inflammatory syndrome present upon hospitalization pointed out leukocytosis with polymorphonuclear cells in 29 patients, while fibrinogen levels >4 g/L were registered in 21 cases. The etiologic agents involved were identified by hemoculture in less than half of the cases (30 patients), being represented by: *Enterococcus* spp, *Staphylococcus* spp, *Streptococcus* spp, *Escherichia coli, Klebsiella* spp, *Achromobacter* spp. At echocardiographic evaluation, we

identified lesions predominantly on the mitral valve (20 cases), followed by the aortic valve (13 cases), tricuspid and pulmonary valve being the less affected (3 cases each). We also found cases of sepsis with endocardial damage in patients with mitral valve replacement (2 cases), as well as localization on cardiac pacemaker electrodes in 2 cases. The prognosis was encouraging, with favorable evolution, but 5 patients required transfer to cardiology clinics and 6 others were indicated heart surgery.
Conclusion. Although favorable evolution predominated in the patients studied, sepsis with endocardial damage remains an entity accompanied by some of the most severe possible implications following cardiac insufficiency, thromboembolism, valve ruptures, and associated comorbidities. It is worth mentioning that endocardial damage and the multitude of involved germs play an important role in the diagnosis and therapeutic approach of these patients.

Anti-NMDA Receptor Encephalitis Associated with Benign Ovarian Teratoma – Case Report

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Background. Anti-NMDA (N-methyl-d-aspartate) receptor encephalitis is a newly reported autoimmune disease often presenting with severe neurological symptoms including psychosis and seizures, and may result in death.
Case report. We present the case of an 18-year-old girl with no significant past medical history in whom seizures, acute confusional state and fever developed 2 weeks prior to admission to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest.
At the time of hospital admission the patient had normal pulse, blood pressure, temperature and no symptoms or signs of meningeal inflammation. Neurological examination revealed a confusional state with episodes of marked psychomotor agitation, bradylalia, paraphasia, right upper limb superficial hypoesthesia and dyschromatopsia. The CBC revealed mild leukocytosis.
Cerebrospinal fluid (CSF) analysis showed mild lymphocytic pleocytosis, slightly elevated protein level and normal glucose level. Inflammatory changes in the left temporal lobe including the hippocampus were suggested by magnetic resonance imaging. Intravenous acyclovir was started without clinical improvement. CSF PLEX-ID screening was negative for herpes-, polio-, adeno- and entero-viruses.
Computerized tomography scan of the pelvis revealed a 30 mm cyst of the right ovary and another 33/26 mm formation suggesting a benign ovarian teratoma. Serum anti-NMDA-receptor antibodies tested positive. With intravenous perfusion of corticoids the patient progressed toward mild clinical improvement followed by marked reversal of neurological disturbances after surgical removal of the ovarian teratoma.
Conclusion. Anti-NMDA receptor encephalitis is a rare disorder with limited information about effective treatments. This type of encephalitis must be taken into consideration in the differential diagnosis of encephalitis, especially in young women. Surgical removal of the benign teratomas associated with this type of encephalitis may increase the chance of neurological recovery. To our knowledge this is the first case described in Romania.

Infectious Endocarditis in Intensive Care – Infectious Diseases vs. Cardiology

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Infective endocarditis (IE) is a disease that is continually changing, with new high risk patients, new diagnostic procedures, the involvement of new microorganisms, and new therapeutic methods.
Despite knowledge of these changes and considerable improvements in diagnostic and therapeutic strategies, IE is still a severe disease. The high morbidity and mortality rate of IE is the consequence of both the destructive valvular lesions causing valve regurgitation and heart failure, and the valvular vegetations with their high embolic potential.
Although the incidence of IE is relatively stable, the patients affected by the disease are older and sicker, and the comorbidity rate is high.
Patients with infective endocarditis (IE) are generally referred to the intensive care unit (ICU) for one or more organ dysfunctions caused by complications of IE. Most complications occur early during the course of IE and are a hallmark of left-sided abnormalities of native or prosthetic valves.
The purpose of this presentation is to review the present therapeutic strategies for optimizing the management of endocarditis, reducing delays in starting antimicrobial therapy, rapid transfer of high-risk patients to specialized medico-surgical centers

The Evolution of a Dual Infection (Tick-borne Encephalitis and *Borrelia burgdorferi*) - Case Presentation

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We present the case of a 34 year-old male patient, from a rural area, that did not identify the moment of the tick bite, admitted to the Infectious Diseases Department Sibiu for sudden onset 10 days back of headaches, vomiting, and fever with unfavorable evolution under symptomatic medication administered as outpatient. On admission, the presence of signs of meningeal irritation required performing a lumbar puncture to confirm the diagnosis of acute lymphocytic meningitis (83 elements/cmm, 100% lymphocytes, proteins 0.77 g/L, glucose 61 mg/dL, chlorine 113.2 mEq/L), without biological changes of the inflammatory syndrome, with thrombocytopenia (114 000/cmm). The evolution was biphasic, favorable during the first 5 days, followed by the recurrence of the intracranial hypertension syndrome and focal neurological signs – right hemiparesis and aphasia. The clinical picture was complicated by bilateral bronchopneumonia with bilateral pleurisy. Serological tests confirmed the presence of acute phase tick borne encephalitis and borreliosis antibodies. The evolution was slowly favorable under treatment with depletives, steroids, antibiotics, antifungal therapy, with remission of motor deficit, aphasia and healing of the pleuropulmonary disease.

Meningoencephalitis Induced by *Listeria monocytogenes* in Adults – Case Series

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Background. *L monocytogenes* is a major pathogen in neonates, but also in adult patients, causing mostly acute but also chronic meningitis in adults who have underlying conditions such as alcoholism and immunodeficiency.
We discuss the diagnostic difficulties and the risk of misdiagnosis of *L monocytogenes* meningoencephalitis in adults.
Methods. Retrospective case series of 7 proven and 2 highly suspected meningoencephalitis cases due to *L monocytogenes* during 2010-2012
Results. We studied 5 men and 4 women with a median age of 49.66 years. Although 6/9 patients were under corticoid/chemotherapy (3 patients) or chronic alcohol consumption (3 patients), in 3 patients there wasn't any proven immunodeficiency. All patients presented with meningoencephalitis clinical picture and one patient associated cerebral and spinal abscesses; five patients required mechanical ventilation. The median duration of symptoms before admission was 10.33 days. CSF characteristics were pleomorphic, with median CSF cell number of 352.22 and median CSF protein level of 562.11 mg/dL. The predominant type of CSF pleocytosis was either lymphocytes (3 patients), neutrophils (3 patients) or mixed formula (3 patients). In patients without antimicrobial treatment/inactive on *L monocytogenes* (6 cases) CSF culture was positive at a median duration of 3.3 days. The outcome was favorable in 4 patients, with 2 deaths and important neurological sequels in 3 patients.
Conclusion. Occasionally *L monocytogenes* meningoencephalitis occurs in patients without immunodeficiencies, of any age. In order to avoid the poor outcome this etiology should be evoked in patients with meningoencephalitis and clear CSF or suggestive of tuberculous meningitis.

A Congenital CMV Infection in a Full Term Newborn

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Background. Cytomegalovirus is an ubiquitous agent that infects people of all ages, sexes and social status. Most infections with CMV are asymptomatic but the virus can cause serious and even life threatening disease in newborns and the fetus. We present a case of congenital CMV infection in a full term, small for gestational age newborn, born naturally from a mother that was not screened for TORCH infections.
Case report. We present the case of a baby girl that presented immediately after birth with cholestatic-like jaundice, lesions of purpura and petechiae on the skin and was immediately transferred to our Neonatal Intensive Care Unit with clinical signs of congenital pneumonia. Also hepato-splenomegaly was present.
The clinical aspect of the baby suggested a TORCH infection so we immediately drew blood to see witch infection we were dealing with. The IgM antibodies for CMV were positive in a titer of 1.79 IU/mL. We started treatment with ganciclovir 6 mg/kg/day until viremia results arrived. Viremia results arrived approximately in 10 days and revealed 281,000 copies/mL, confirming again an aggressive disease. Ganciclovir treatment was started as soon as we had confirmation of CMV congenital infection in a dose of 6 mg/mg/day with good result for the first 4 weeks of treatment without major neutropenia.
Conclusion. Long term prognosis is at this time reserved; intracerebral calcifications and intraventricular hemorrhage predict motor and developmental retard; chorioretinitis, progressive deafness and chronic hepatitis are to be expected due to the evolution so far.

Aspects of *Listeria monocytogenes* Infections

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Background. *Listeria monocytogenes* is one of the bacteria that can be transmitted through food and cause various issues ranging from a simple flu syndrome to meningoencephalitis, septicemia, and abortion/stillbirth.
We present cases infected with Listeria monocytogenes, admitted to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" in 2012.
Method. Positive blood cultures from the patients admitted to the intensive care unit were processed according to the standard methods, making passages on blood agar, PVX, CLED and Gram-colored smears and methylene blue were made. Identification was performed by conventional methods (Gram morphological criteria, culture types on agar blood and exoenzymatic behavior: catalase test, β-hemolysis on agar with 5% sheep blood, CAMP test) and automatically (VITEK 2 C - bioMerieux). Antibiotic susceptibility testing was done using the automatic method VITEK 2C.
Results. We identified three cases of *Listeria monocytogenes*, one with meningoencephalitis in an immunocompromised patient (alcoholic), the second with a septicemia in a patient aged 37 working on a poultry farm and the third in a patient aged 32, 10 weeks pregnant, who after a flu-like onset developed subjective genital symptoms and bloody vaginal discharge, finally leading to the abortive disease due to *Listeria monocytogenes*. Strains from patients with meningoencephalitis and septicemia belonged to the 1a serovar and at the pregnant patient it was 4b. The serological titre was ≥1/320 for all cases.
Conclusion. In 2 cases the identified serotype is 1a, dominant in Romania, and the 4b serotype coming from the patient with abortive disease is widespread in Western Europe.

Hand Hygiene Program at INBI Matei Balş

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Background. In Romania, although health care workers (HCWs) hand hygiene is a priority, not always aware of its importance as a means of preventing healthcare associated infections. World Health Organization (WHO) data shows that only 6 (including the National Institute of Infectious Diseases "Prof. Dr. Matei Balş") of more than 400 hospitals in Romania have implemented programs to improve hand hygiene.
The study objective was to evaluate the hand hygiene program in 3 pilot sections of INBI Matei Balş, having implemented the WHO program in May 2011.
Method. Courses have been organized and the necessary infrastructure was provided. The HCWs has been tested and the consumption of disinfectant and liquid soap has been monitored in the pilot sections and compared against the other sections, twice a week, June-August 2011 and June-August 2012.
Results. The study included 15 doctors (75%) and 19 nurses (63%) of the 3 pilot sections (23%) and 11 doctors (75%) and 21 nurses (70%) from other sections.
In 2011, the highest average value of the saprophyte microbial load was found at the middle of the day at all HCWs and in all section was higher with the doctors (119 germs/cm) than the medium qualified medical staff (46.7 germs/cm).

In 2012, the highest value was found also with doctors, at midday, but the value was significantly lower (10 germs/cm with doctors and 8 germs/cm with nurses) in pilot sections and comparing with 2011.
The consumption of hand disinfectant increased significantly in the pilot sections.
Conclusion. Implementing the WHO program lead to improving the knowledge and the practices of HCWs, but with an increased consumption and costs.

Benefits and Risks in Using Cephalosporins as First Line Therapy in Peritoneal Dialysis-Associated Peritonitis: A Case Report

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Background. One of the most common complications of peritoneal dialysis is peritonitis, most of the times caused by coagulase-negative *Staphylococcus* spp. Lately, there has been an increased incidence of peritonitis caused by fungal infections, with possible severe consequences in the absence of a rapid proper treatment.
We intend to highlight the consideration that must be given to uncommon pathogens and unexpected results, regarding laboratory results and treatment outcomes in peritoneal dialysis-associated peritonitis.
Case report. We present the case of a 53 year-old patient on peritoneal dialysis for one year, admitted in the nephrology clinic with the presumptive diagnosis of suppurative peritonitis.
The patient was admitted for fever, abdominal pain and fatigue; the dialysate effluent looked purulent, cloudy. A CBC showed leukocytosis, 12,500/cmm, with 75% neutrophilia with toxic granulations. Based on this ground, cefoperazone was the first line treatment. After the first 2 days of empiric treatment, the patient's state continued to be unfavorable and required central dialysis. The microbiological exam on Agar after 24 hours, suggested staphylococcus; after 48 hours, by studying the cultures on blood agar, mannitol salt agar and Sabouraud dextrose agar, we established the presence of fungi while the staphylococcus wasn't confirmed. Antifungal susceptibility tests showed sensitivity to amphotericin B, 5-flucytosine, caspofungin, fluconazole, itraconazole, ketoconazole; resistance to nystatin. Treatment was changed according to the lab results, by stopping the antibiotic and switch to antifungal therapy-fluconazole intraperitoneally and intravenously (i.v.) and amphotericin B i.v. which solved the infection.
Conclusion. The choice of laboratory investigations is very important in establishing peritoneal dialysis-associated peritonitis treatment. Moreover, obtaining rapid results requires the routine use of modern technologies for microbiological diagnosis.

Botulism in Bihor County during 2001-2012

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Background. Botulism is a rare but extremely severe, caused by botulinum toxin, produced by *Clostridium botulinum* in anaerobic conditions. The toxin can reach the body in three ways: through ingestion of food (food botulism), digestive tract colonization by the bacterium in children (infant botulism) or by contamination of wounds (wound botulism).
Methods. We conducted a retrospective study of botulism cases admitted to the department of infectious diseases in Oradea during 2001-2012. All patients in the study were diagnosed with food-borne botulism, the most frequent aliment incriminated was pork ham thermally untreated. The diagnosis was based on anamnestic data, clinical and identification of botulinum toxin (later on).
Results. During 2001-2012 (September) in Bihor County there were 51 confirmed cases of food botulism, 58.82% from rural areas. The incidence was highest in 2004 and 2012 (1.9 per 10,000 inhabitants), this year, in Bihor County 10 cases of botulism (19.60%) were recorded, most medium severity cases, 3 severe cases, of which 1 case of acute respiratory failure installation requiring assisted ventilation subsequently with slowly favorable outcome. We recorded data regarding incubation duration, symptoms at onset, affecting cranial nerves (diplopia, ptosis, difficulty swallowing), autonomic nervous system, respiratory failure, complications and specific treatment.
Conclusion. All patients in the study were diagnosed with food-borne botulism, the most frequent aliment incriminated was heat-untreated pork bacon. Most patients had a medium severity clinical form. The diagnosis was based on anamnestic data, clinical data and late identification of botulinum toxin.

Pitfalls of Management and Diagnostic of Q Fever

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Background. Q fever, produced by *Coxiella burnetii*, is an infectious disease not too widely spread in our region which raises recognition and diagnostic issues.
Our objective is to increase the awareness of clinical doctors regarding a possible increase in the incidence of this infection and the necessity of its inclusion in diagnostic algorithms.
Case report. We present a recent Q fever case in a 53 year-old female without any significant pathologies, diagnosed one month after the onset.
The disease started in complete health status with: asthenia, sweat, headaches, difficult breath and variable fever with 7-10 days cycle. ENT examination and thoracic plain films showed unspecific inflammatory signs. Inflammation tests were constantly high. Symptomatic and broad spectrum antibiotic treatment was initialized. The patient's status did not improve after one month of multiple antibiotic regimens, Q fever being considered. Serologic confirmation was received and specific antibiotic treatment was initialized with azithromycin and later switched to doxycycline. The last treatment led to complete clinical and serologic remission.
Conclusion. Unspecific and persistent symptoms resistant to conventional therapy should prompt a possible Q fever diagnosis which could be included in a routine diagnostic test.

What Do They Have in Common, *Treponema pallidum* and Vitamin B12?

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Background. Tabes dorsalis is a slowly progressive degenerative disease that manifests in the tertiary stage of the *Treponema pallidum* infection, affecting the posterior columns and roots of the spine. The clinical picture consists in progressive ataxia (mainly in lower limbs), with diminished proprioceptive sense, paresthesia, diminished tendon reflexes and sphincter dysfunction. A very similar syndrome is also observed in vitamin B12 deficiency.

The present work aimed to underline the common features of two clinical entities different in terms of etiology, physiopathology, paraclinical findings and therapeutic approach.
Case report. We present the case of a 64 year-old patient with gait and balance disturbances which were aggravated by the loss of visual control and paresthesias mainly in the lower limbs; the symptoms had a subacute onset, with progressive worsening.
The neurologic evaluation demonstrated a positive Romberg test of tabetic type, a broad-based "foot slapping" gait, necessitating unilateral aid, a mild crural monoparesis, lower limbs dysmetria (aggravated by eyes closing), diminished knee and Achilles reflexes, bilateral Babinski sign, mioartrokinetic and vibratory hypoesthesia in the lower limbs, urinary incontinence. The paraclinical tests (including lumbar puncture) and thoraco-lumbar MRI scan were all normal except a vitamin B12 deficiency; the electrophysiological studies revealed a mild decrease of the nerve conduction velocity in the left lower limb. The tests for determining the presence of *Treponema pallidum* infection were all negative.
Conclusion. Based on the clinical and paraclinical findings, a diagnosis of myelopathy and neuropathy due to vitamin B12 deficiency was made; the administration of B12 determined improvement of the symptoms.
The present case illustrates the importance of a high index of suspicion for B12 deficiency even in the absence of anemia. Also, we underline the importance of making the differential diagnosis with vitamin B12 deficiency in patients with symptoms highly suggestive for tabes.

Atypical Onset in a Case of Acute Hematogenous Osteomyelitis with *Staphylococcus* Chromogenes

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Background. Acute hematogenous osteomyelitis is found predominantly in children and frequently involves long bones, *Staphylococcus* chromogenes being a rare etiology.
Case report. We present the case of a male 12 year-old obese child, with the father HIV-positive, who was diagnosed with acute hematogenous osteomyelitis with *Staphylococcus* chromogenes at the proximal right femur. The disease had an atypical onset, raising questions of diagnosis. The child's history included staphylococcal infections in the early childhood. He was hospitalized for fever, headache, photophobia and stiff neck. Laboratory tests revealed a biological inflammatory syndrome; the lumbar puncture ruled out meningitis and a neurological condition was excluded. During hospitalization, he presented pain in the right coxofemoral joint without local inflammation. The blood cultures revealed *Staphylococcus* chromogenes and a bilateral hip MRI with contrast-acute showed osteomyelitis of the proximal right femur. The patient was administered therapy according to antibiogram for 90 days and conservative orthopedic treatment.
The child became afebrile, with symptom remission, slow normalization of the biological inflammatory syndrome and the MRI imaging improvement at one-month and three-months of therapy.
Conclusion. The atypical onset of the disease consisted of meningeal syndrome. The right lower limb functional impotence occurred several days later; therefore diagnostic confusion could be made. The disease can be related to obesity, previous staphylococcal infections and a recent low-height fall injury (swing).

Assessment of the Therapeutical Efficacy of Lacidofil-WM in the Treatment of Acute Diarrheal Disease in Children

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Background. Acute diarrheal disease is the second cause of infectious disease morbidity, after acute respiratory illnesses, and a major cause of child mortality, with 5-10 million deaths per year worldwide.
Methods. We performed a study to assess the efficacy of Lacidofil-WM (*World Medicine, USA*) in pediatric patients younger than 5 years, with ADD, admitted to the IMSP Clinical Municipal Hospital of Contagious Diseases in Children, during 2010-2011.
Results. The study included 36 patients (28, 77.8%, under 3 years and 5.5% infants). Twenty-eight patients were admitted to the hospital within the first two days of disease.
Twenty-one (58.3%) were diagnosed with acute gastroenterocolitis, 6 (16.7%) with gastroenteritis, 8 (22.2%) with enterocolitis and one case (2.8%), with enteritis.
The clinical picture included toxic syndrome (90%), signs of dehydration (24%) and discrete rhinorrhea (42.8%). Fever and vomiting occurred within the first day in 80.6% of cases and lasted for three days in 61.1%. Diarrhea lasted for five days in 83.3% of patients.
Twelve children (33.3%) had rotavirus infection, 2 (5.6%) salmonellosis, 1 (2.8%) shigellosis, 7 (19.4%) conditioned pathogenic enterobacteria, 3 (8.3%) cryptosporidiosis, while in 11 cases (30.6%) the etiology was not identified.
An initial stool examination for intestinal dysmicrobism revealed decreased numbers of bifidobacteria (9 cases), lactobacteria and lactic streptococci (10 cases), enterococci (15 cases), together with a decrease in the numbers of normal-fermentation *Escherichia* (24 cases) and an increase in the number of reduced-fermentation *Escherichia* bacteria in 8 cases.
All patients tolerated Lacidofil-WM and continued treatment for up to 14 days post-discharge. Stool examination at 14 days of treatment showed normal levels of bifidobacteria (35 cases), lactobacteria (32 cases); lactic streptococci (29 cases), enterococci (28 cases), reduced-fermentation Escherichia (8 cases).
Conclusion. Treatment with Lacidofil-WM appeared to be efficacious, increasing the numbers of bifidobacteria and lactobacteria, lactic streptococci and enterococci. A short course of Lacidofil-WM during hospital admission influenced the presence of certain conditioned pathogenic enterobacteria in stool.

Antimicrobial Resistance Pattern in a County Children's Hospital during 2008-2011

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Background. Surveillance of antimicrobial resistance is a major component in antibiotic policy and prevention of nosocomial infections in every hospital.

We evaluated the antimicrobial resistance of the most common bacterial strains isolated in the Clinical Children's Hospital of Braşov, Romania.
Methods. Retrospective study on a 4 year period (01.01.2008-31.12.2011) on 7,161 bacterial strains, using disk-diffusion method and E-tests for MIC.
Results. We isolated 1,131 strains of *S aureus*. The proportion of MRSA strains has increased constantly (17%, 20%, 36%, 41%). Susceptibility to aminoglycosides is maintained, especially for netilmicin (under 2%); resistance to gentamicin increased from 5.7% in 2008 to 15% in 2011. There is high and growing resistance to amoxicillin-clavulanate (24%, 29%, 43%, 44%), cefuroxime (34%, 29%, 46%, 43%), ceftriaxone (31%, 32%, 48%, 46%) and macrolides (clarithromycin 38%, 39.5%, 49%, 49%). The strains were susceptible to fluoroquinolones (resistance to ciprofloxacin decreased from 15% to 7%).
All the 525 strains of *P aeruginosa* were highly resistant to all antibacterials tested (ceftazidime 48%, gentamicin 50%, ciprofloxacin 40%), except for colistin (1%); 30% of the strains were MDR.
Among the *Enterobacteriaceae*, we focused on *E coli* (1,428 strains) and *K pneumoniae* (455 strains). Both were susceptible to fluoroquinolones, colistin and carbapenems, but over 20% of the strains were resistant to cephalosporins. We recorded a high resistance to amoxicillin-clavulanate (46% in *E coli* and 78% in *K pneumoniae*) and aminoglycosides (gentamicin: 19% in *E coli* and 62% in *K pneumoniae*; netilmicin: 10%, respectively 51%). Resistance to ciprofloxacin had little variation, around 11.5%.
Conclusion. High resistance to amoxicillin-clavulanate, second and third generation cephalosporins and clarithromycin limits their use in the empiric treatment of infections with the analyzed species.

Clinical Characteristics and Prognostic Factors in Bacterial Meningitis in the Elderly Patients

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Background. Bacterial meningitis is an important cause of mortality and morbidity in the elderly patient; this category is more vulnerable to serious infections due to associated comorbidities, an aging immune system and decreased body resistance. We analyzed the clinical features, evolution, aiming to define the risk and prognostic factors of bacterial meningitis in elderly patients.
Methods. Retrospective analysis which included 100 patients aged >65 years, diagnosed with bacterial meningitis in the Infectious Diseases Hospital Iaşi between 2005 - 2010.
Results. In this study, we found that the elderly group accounted for 23.14% (100/432) of the overall bacterial meningitis cases. We found prevalence in males (58%) and cases from rural areas (62%), with the highest incidence in the age group 65-70 years (72%). We noted from the admission that predisposing factors for bacterial meningitis were: chronic liver disease (44%), diabetes mellitus (26%) and invasive neurosurgical procedure (20%). The most common clinical manifestations at onset were neurological ones (68%), fever (63%), signs of meningeal irritation (59%), respiratory symptoms (33%) and onset with coma in 23% of patients. CSF analysis revealed a turbid macroscopic appearance of CSF in 36% of cases and 35% had a moderate pleocytosis. 33% of patients with albumin levels in the CSF ranging from 1-3g/L, the majority presenting with low glycorrhachia (48%). Only in 35% of cases the microbial agent was identified (pneumococcal – 14%, *Staphylococcus aureus* and BGN – 5%) due to the fact that more than half of patients had received antibiotics before admission. Evolution of patients was generally favorable (75%), only a few cases developing neurologic complications (13%); the mortality rate was average (12%).
Conclusion. Bacterial meningitis remains an important public health issue mostly because of complications and high mortality. Negative prognostic factors identified were: old age, associated chronic diseases, neurosurgical interventions, late presentation, onset of meningitis with coma.

Erysipelothrix rhusiopathiae Infection

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Background. *Erysipelothrix rhusiopathiae* is a Gram-positive rod, responsible for infections in humans and animals.
Case report. The case presentation is supported by the medical literature and information found in the patient records from the Infectious Diseases Department of the University of Oradea.
A 45 year-old male patient, butcher, presented in May 2010, in the Infectious Diseases Department, for multiple painful skin lesions, headache, fever, joint aches and lymphadenopathy. The laboratory test revealed leukocytosis associated with inflammatory syndrome. The diagnosis was erysipeloid diffuse cutaneous form, based on the patient's occupation, typical inflammatory lesions, and mild laboratory abnormalities.
Treatment with ceftriaxone (2 g /12h IV), ciprofloxacin tablets (500 mg bid) both for 7 days, was prescribed. The lesions disappeared after 7 days of treatment.
Conclusion. Diffuse cutaneous erysipeloid is a rare form of an uncommon zoonosis.

Molluscum contagiosum Skin Infection: A Rare Medical Complication of Tattooing

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Background. Tattooing is a procedure of inserting indelible ink into the dermis layer of the skin for decorative purpose; during the last 20 years, its popularity increased, and so did the procedure-related complications, among which the infectious complications have a paramount importance. *Molluscum contagiosum* infection is a rare complication of tattooing, only a few cases have been documented in the medical literature.
Case report. We present the case of a 25 year-old male patient with numerous umbilicated skin-colored papular lesions confined to the skin area of a black ink tattoo located on the abdomen. Upon presentation, the patient, who was a professional tattoo-artist himself, had undergone a self-tattooing procedure approximately 3 months beforehand. The first lesions appeared in the tattoo area 3 weeks following the tattooing procedure and were scratched off by the patient. However, no similar lesions were found on any other skin area except for the area of the tattoo. General physical examination revealed an otherwise healthy patient while the laboratory tests – including repeated HIV test and hepatitis B and C testing – were negative.
Histopathological examination revealed keratinocytes containing characteristic amorphous eosinophilic inclusion bodies and black pigment deposits in the superficial dermis. Treatment necessitated multiple curettage sessions over a 5 month-period regardless of the close follow-up visits of the patient.
Conclusion. We conclude that *Molluscum contagiosum* is an unusual complication of tattooing. The fact that the lesions were strictly confined to within the borders of the tattoo and did not appear

anywhere else on the surrounded skin in spite of the patient scratching the lesions, the great number of the lesions, together with the fact that multiple curettage sessions were necessary for complete treatment may suggest that the black ink used in the process of tattooing may elicit a decrease in the local immunity.

Limits of Exploratory Imaging Techniques in the Diagnosis of Ascendant Meningitis – Case Report

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Streptococcus pneumoniae is statistically the second etiologic agent involved in bacterial meningitis in adults, after meningococci. Craniocerebral fluid (CSF) fistulas after cranial traumatisms are sometimes followed by ascending meningitis, most often recurring.
We present the case of a 54 year-old patient with a history of TCC admitted to emergency with a diagnosis of acute meningitis. The peculiarity of the case is the history of unilateral watery rhinorrhea interpreted as allergic rhinitis, solved either spontaneously or with otolaryngology treatment, which in reality were CSF leakage episodes.
Proof that the nasal secretion was CSF was obtained biochemically, but we couldn't determine the precise site of the bone lesion.
CSF leakage is rarely spontaneous, usually occurring after head injury and in most cases it is terminated either spontaneously or after neurosurgical interventions. CSF fistulas are complicated by meningitis in 25-50% of patients, often recurrent meningitis. The CSF fistula diagnostic algorithm requires first confirmation of CSF fluid leaking from the nose or ear, by immunoelectrophoresis for beta 2 transferrin (enzyme secreted by the choroid plexus). The next step is locating the fistula which involves imaging studies (cranial CT with high resolution, with coronal sections under 1 mm to view the sinuses, temporal bone, MRI cisternography) or surgical exploration (otolaryngology or neurosurgery).

Vestibular Rehabilitation – The Election Treatment Method for Gentamicin-induced Bilateral Vestibular Loss

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Background. This paper presents the results of a research clinical study which aimed to evaluate health-related quality of life (HRQoL) and to reveal the actual benefit of vestibular rehabilitation (VR) in patients with gentamicin-induced bilateral vestibular loss.
Methods. Four patients diagnosed with postototoxic bilateral vestibular loss in the Institute of Phono-Audiology and Functional ENT Surgery and Otomed Medical Center, underwent six months of individualized VR protocols. HRQoL was assessed before and after VR using the Dizziness Handicap Inventory (DHI), Activities-specific Balance Confidence Scale (ABC) and Dynamic Gait Index (DGI).
Results. Evaluation after VR, with both specific vestibular methods and questionnaires showed significant improvement in voluntary control of the center of gravity (better equilibrium) as well as in HRQoL.
Conclusion. Long term VR improves overall equilibrium as well as HRQoL in patients with gentamicin-induced bilateral vestibular loss. After six months of customized VR, patients experienced gait improvement and reduced self-perceived disability and intensity of symptoms during usual activities.

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Antibiotic Resistance of the Main *Enterobacteriaceae* Isolated in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" between July 2011 and June 2012

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Background. Increased incidence of extended spectrum beta-lactamase (ESBL)-producing *Enterobacteriaceae* or resistant to quinolones and the appearance of resistant strains to carbapenems requires more judiciously selection of initial antibiotic therapy.
The aim of this study is the evaluation of resistance patterns of *Escherichia coli* and *Klebsiella pneumoniae*.
Method. We analyzed the resistance profiles of *E coli* and *K pneumoniae* isolates, identified as etiologic agents of infections in patients hospitalized in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" between July 2011 and June 2012. The antibiotic susceptibility testing was performed by disc diffusion method or CMI values by E-test method, according to CLSI 2010. The isolated considered to represent colonizations and the duplicates were excluded.
Results. In the studied period we identified 397 infections caused by *E coli* and 112 infections due to *K pneumoniae*. From the tested strains, 106 (20.8%) ESBL-producing isolates were found, more frequently for *K pneumoniae* than for *E coli* (39.3% vs. 15.6%), RR=2.5 (1.8; 3.5), p<001. The resistance to ciprofloxacin has increased, more significantly for *K pneumoniae*: 52.67% vs. 26.2%, RR=1.56 (1.3; 1.9), p<.001. Fosfomycin and nitrofurantoine were active on 98.7% of the *E coli* strains. From the isolates of *K pneumoniae*, 8.03% were resistant to carbapenems. Colistin and tigecycline were constantly active on *E coli*; we identified three colistin-resistant *K pneumoniae* strains.
Conclusion. Fosfomycin and nitrofurantoine are recommended instead of quinolones and beta-lactam agents as first line treatment for uncomplicated urinary tract infections. In severe infections caused by *K pneumoniae*, therapy should be tailored on the basis of susceptibility results; if carbapenems are inactive, tigecycline represents the backup solution.

Metabolic Syndrome and Non-Alcoholic Fatty Liver Disease (NAFLD)

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Background. NAFLD is the hepatic manifestation of metabolic syndrome (MS) and may precede the metabolic syndrome. The prevalence of metabolic syndrome is increasing and NAFDL becomes the most common chronic liver disease. NAFDL includes simple fatty infiltration (a benign condition) and non-alcoholic steatohepatitis which may progress to cirrhosis.
We evaluated hepatic manifestation in patients with metabolic syndrome and the diagnostic methods.

Methods. Seventy-two patients with metabolic syndrome were enrolled. The following criteria were used for diagnosis of metabolic syndrome: waist circumference, blood pressure, fasting plasma glucose and a lipid profile. For all patients the same workup was initiated: previous or recent history, physical exam, functional liver tests and abdominal ultrasonography. Viral serologic tests, computed tomography scanning or magnetic resonance retrograde cholangiopancreatography, non-invasive markers of liver fibrosis (FibroMax), serological tests (autoantibodies) were done in selected cases. We excluded patients with viral hepatitis, Wilson's disease, primary biliary cirrhosis, autoimmune hepatitis, alcoholic liver disease. Between December 2010-June 2012 all of these patients were monitored.
Results. Most patients were asymptomatic (94%). Abdominal ultrasonography found various grades of steatosis for all patients. 48 patients (67%) had "benign" hepatic steatosis and non-alcoholic steatohepatitis was observed in 24 cases (33%).
However, nonalcoholic steatohepatitis has a significantly increased risk of cardiovascular disease compared to simple steatosis (7 patients with non-alcoholic steatohepatitis had coronary acute syndrome versus 2 patients with steatosis in this period). As a liver disease, non-alcoholic steatohepatitis progressed to cirrhosis in 2 cases.
Conclusion. Non-alcoholic fatty liver disease is both a hepatic disease and a systemic disease.

Oral Candidiasis - Strains and their Sensitivity to Antifungal Agents

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Background. We describe the most important *Candida* species isolated from the oral cavity in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" Laboratory between January 2008 and December 2011, and evaluate their sensitivity to antifungal agents.
Methods. This is a descriptive observational study. We have used data about mycological investigations performed on patients included in study. Patients were eligible if they were hospitalized between January 2008 - December 2011, they were aged >18 years and they were diagnosed with oropharyngeal mycoses using a specific laboratory method, together with antifungal susceptibility tests. Patients' data included: the species of *Candida* isolated (ID32C, bioMerieux), microbiological particularities and the antifungal drug sensitivity (amphotericin B, 5-flucytosine, fluconazole, itraconazole and voriconazole), using ATB Fungus (bioMerieux) or E-test, for some of the strains.
Results. We isolated a total of 634 *Candida* strains. *Candida albicans* was the most frequently isolated fungal pathogen (77.76%), followed by *C glabrata* (7.88%), *C krusei*, *C tropicalis*, *C kefyr*. We have found an increase in antifungal drugs resistance, especially among *Candida* non-albicans strains, but also for *C albicans* (fluconazole, itraconazole and voriconazole).
Conclusion. It is mandatory to determine the identity and sensitivity/resistance of the fungi isolated in the microbiology laboratory in order to choose an individualized treatment and to avoid an increase in the prevalence of the resistance to antifungal drugs.

The Spectrum and Phenotype of Antibiotics Resistance of Bacteria Isolated In Blood Culture in the Hospital of Infectious Diseases in Craiova during 2009 - 2011

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Background. Blood culture is a fast method of isolation (2-72 hours) of germs involved in severe infections with bacteremia or septicemic conditions, leading to a fast diagnosis of state, isolation of germs, increasing the speed of the etiologic diagnosis and the speed of the determination of their sensitivity to chemotherapy.
Methods. This is a retrospective study on the detection of the etiologic agents of acute infections isolated by blood culture and the establishment of their resistance phenotypes, adopting the therapeutic conduct for the sensitivity of the germs involved, in order to prevent the emergence of multiresistant strains.
There were 137 strains involved in the study in the semiautomatic BACTEC 9050 system (that contains specific environments that inhibit the existing antibiotic in the serum sample, allowing multiplication of germs).
Germs were identified using API 20E galleries (ref. no. 20 100, bioMérieux) and antibiotic sensitivity testing was performed in parallel using the standard ATB UR 5 galleries (ref. no. 14335, bioMérieux), as well as the Kirby-Bauer diffusion method.
Results. Of the total 137 strains studied, the following were identified during the 3 years: 13 cases with *Klebsiella pneumoniae*; 38 cases of *Escherichia coli*; 12 cases of *Streptococcus viridians*; 7 cases with *Enterobacter* spp; 4 cases of *Haemophilus influenzae*; 47 cases of *Staphylococcus aureus*.
The annual incidence of isolation was similar: 59 strains in 2009, 38 in 2010, 40 in 2011.
We found that betalactamine resistance phenotypes were accompanied by resistance phenotypes to aminoglycosides, fluoroquinolones, cotrimoxazole, carbapenems.
Conclusion. We noticed bacterial resistance to common chemotherapeutic agents (ampicillin, cotrimoxazole, etc.) and an increased sensitivity to third generation cephalosporins, quinolones, carbapenem.

Clinical and Biological Profile of Pneumococcal Meningitis - A 5 Years Retrospective Study

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Background. Pneumococcal meningitis continues to represent an important public health issue due to both the gravity of the disease, with a high mortality (20-40% of cases) and a high rate of neuropsychic sequelae, and the need of a periodic revision of the preventive and therapeutic strategies according to the dynamic of the penicillin-resistant serotypes or the multidrug resistant strains.
Methods. In a retrospective study on 25 children admitted in the 2nd Infectious Disease Department Timişoara between 2007 and 2011, we examined the conditions that favored the disease, the modifications of the CSF, the clinical form of disease and prior treatment with beta-lactams.
Results. The primary involvement of the meninges was present in 40% of cases; secondary meningitis was present in septic primary determinations, after an iatrogenic intervention (cochlear implant – 1 case), in cranial injuries (5 cases): 2 children with frontal-ethmoidal

fistula. The CSF latex agglutination test was positive in 68% of cases. The direct smears examination was positive in 92% of cases, the CSF culture was positive in 28% of cases and the blood culture was positive in 12% of cases. The antimicrobial susceptibility tests showed resistance to penicillin in 62%, to third generation cephalosporins in 40%, chloramphenicol in 20%, and meronem in 20%. The clinical forms were common in 96% of cases, 1 case had an unfavorable outcome with exitus after 12 hours.
Conclusion. The clinical forms of disease were with moderate severity, with a fatality of only 4%.There was a discrepancy between the latex agglutination test, direct microscopic examination and the CSF cultures. The high percent of penicillin-resistant strains should be outlined.

Troponin - a Myocardial Injury Marker or an Unfavorable Evolution Marker in Sepsis. Case Report

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Background. Troponin is the main marker for diagnosing myocardial injuries, but increased troponin levels have also been found in patients suffering from different forms of sepsis.
Case report. We present the case of a 30 year-old patient, known to suffer from a rheumatoid mitral disease, who was admitted to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" as a result of a transfer from a cardiology department for a pulmonary disease accompanied by fever (39.5°C). The diagnosis of infectious endocarditis was excluded because of transesophageal echography and negative blood cultures.
The clinical exam at the moment of admission showed that the patient was feverish, dyspneic and polypneic, with an abolished vesicular murmur in the left hemithorax and a second degree systolic murmur in the mitral focus. The biological tests showed neutrophilic leukocytosis, an inflammatory syndrome and positive procalcitonin (0.62 ng/mL). The radiologic exam showed left pleural effusion.
Although the patient received broad spectrum antibiotic therapy (moxifloxacin, meropenem, linezolid), antifungal (anidulafungin), antituberculous medication and the pleural fluid was evacuated, the patient's status deteriorated, in the end resulting in MSOF and exitus. The patient also suffered from several ventricular fibrillation episodes which required electric conversion. At the same time with the patient's deterioration the cardiac markers became positive (NT-proNBP=34,383 ng/L, TnI troponin=0.35 ng/mL). Therefore, we can consider the troponin increase as a result of the infectious process or subsequent to the defibrillation and the patient's previous cardiac disease.
Conclusion. We presented the case of a patient suffering from severe bronchopneumonia with an unfavorable evolution despite the etiological treatment which resulted in the end in MSOF and exitus. Regardless of the troponin release mechanism, the increased troponin I or T levels imply a poor prognosis in most cases.

Use and Abuse of Antibiotics in Lugoj

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Background. The use of antibiotics is still widespread in the area of Lugoj. We aimed to establish the degree of use of antibiotics by patients who have presented infectious diseases between November 2011 and June 2012.
Methods. We performed a study which included 676 patients, divided into groups of respiratory, urinary, digestive and eruptive diseases.
Results. 14,820 patients in ER: 502 were sent to the department of infectious diseases. Patients sent by family doctors were added. The most common were respiratory infections (31.8%), followed by skin manifestations (19.97%), digestive (15.82%), urinary (6.80%) and pharyngeal disorders (4.73%).
Fifty patients with respiratory infections, prior to consultation, were prescribed antibiotics – aminopenicillin (50%), cephalosporin (22%), fluoroquinolone, trimethoprim-sulfamethoxazole. After the presentation, 135 of 215 patients were treated with antibiotics. 31% of those hospitalized did not receive antibiotics, 40 patients needed antibiotics association, and 87 required single antibiotics. Fluoroquinolones have been used in 31.5% of the cases, aminopenicillins in 24.4% and cephalosporins in 10.2%.
Seventy-two patients presented eruptive diseases, 18% receiving antibiotics at home.
Antibiotics were been prescribed for the outpatient treatment of diarrhea and hospitalized patients required rehydration whereas 24% received antibiotics.
Urinary infections were treated with antibiotics in 72% of the cases, while for pharyngeal disorders 69% of the cases received antibiotics.
Conclusion. The use of antibiotics is still widespread both by one's own initiative and on the indication of doctors, aminopenicillin dominated. The use of antibiotics for digestive symptoms is limited. The majority of patients, and not only the patients, considered that fever is treated with antibiotics.

Features of Viral Meningitis in the Infectious Diseases Hospital of Iaşi between January and August 2012

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Background. Because of its epidemic potential and development of severe forms of disease, viral meningitis represents an important public health problem. This paper aims to study the main clinical, epidemiological features and etiologies of viral meningitis in Iaşi County in 2012.
Methods. We retrospectively studied hospital documents of patients diagnosed with viral meningitis in the Infectious Diseases Hospital "Sf. Parascheva", Iaşi from January 1 to August 31, 2012 (65 cases). The etiologic diagnosis was established in collaboration with the Regional Public Health Center of Iaşi and the Cantacuzino National Institute for Research and Development for Microbiology and Immunology, Bucharest (IgM antibodies for Coxsackie virus and/or West Nile virus).
Results. There was an increase in the frequency of illnesses of 4.74 times compared to the average of the last 3 years (13.7 cases); 58.5% of patients were males, 53.9% from urban areas. Most illnesses (73.8%) occurred in children aged 1 to 14 years. The most constant manifestation was headache, present in 96.9% of patients, followed by fever (92.3%) and vomiting (83.7%). Meningeal contracture syndrome was often (38.4%) less intense or incomplete. Striking manifestations of encephalitis were recorded 13.8% of patients. 11/26 of the patients investigated serologically were positive for IgM antibody against coxsackievirus and only 1/17 for West Nile virus.

Evolution was favorable in all cases, no deaths occurred. The average length of admission was 9.6 days.
Conclusion. In the last 8 months we have seen a significant increase in the number of cases that mainly affected urban children, the dominant etiology being represented by enteroviruses.

Early Predictive Factors for the Success of the Medical Treatment of Diabetic Foot Infections

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Background. The incidence of diabetes and its complications is rising globally and nationally; foot infections, favored by immunosuppression and peripheral vascular disease, increase the risk of amputation necessity, the medical treatment sometimes being inefficient. We studied the most common pathogens implicated in diabetic foot infections, the severity of disease, correlations with risk factors, therapeutic options and evolution of disease appreciated on the necessity of the surgical act.
Methods. We evaluated 90 patients diagnosed and treated in the Infectious Diseases Hospital of Iași and the Nutrition Clinic of the County Hospital of Iași between 2009-2011.
Results. 45% of infections were monobacterial (usually Gram-positive cocci and *Enterobacteriaceae*). Despite the initiation of parenteral antibiotic therapy, sometimes with more than one drug, 28 (31.1%) of patients had an unfavorable evolution needing surgical intervention. The risk of amputation was higher in severe polymicrobial infections and with bone involvement.
Conclusion. Antibiotics were frequently needed, but often insufficient in the treatment of these infections. The optimal management of diabetic foot infections requires the existence of an interdisciplinary team that can address both medical and surgical treatment.

Human rabies in the European Union – epidemiological data

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Background. Transmission of rabies to humans occurs rarely in Europe but in the absence of vaccination, it almost invariably leads to a fatal disease. In 2007, Romania implemented a program for rabies eradication in foxes.
Methods. We performed a descriptive study evaluating the trend of rabies disease in the European Union and particularly in Romania, both in animals and in humans, from 2008 to 2012.
Results. The Antirabic Center of the National Institute for Infectious Diseases "Prof.Dr. Matei Balş", Bucharest, Romania received a large number of adults and children reporting animal bites and seeking medical assistance during the past years, with a maximum in 1998 and 2000 (over 20,000 cases). The animals responsible for the bites were mostly dogs and cats, but rat bites were also reported.
The highest numbers of animal rabies were recorded in 2008 (1,089 cases), with a steady decline in the following years, down to 195 cases in 2011.
The European Center for Disease Prevention and Control (ECDC) reports that from 2005 to 2009 there were 12 cases of human rabies recorded in the European Union. From 2008 to 2012, there were 6 cases of human rabies in Romania, with bites from domestic cats and stray dogs causing half of the cases.
Conclusion. Given the interesting data on cat bites and their association with transmission of rabies to humans, vaccination after cat bites should be taken into consideration and should be advised, particularly in rural areas, or in forest areas, where domestic animals can come in contact with wild animals potentially infected with the rabies virus. Continuous monitoring for the disease in wildlife and cities is of utmost importance and should be continued, together with the programs for vaccination of stray dogs and foxes, in order to eliminate the animal reservoirs of rabies virus.

Particular Cytomegalovirus Infection in Infants – Case Presentation

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Background. The importance of the ground, method and start of cytomegalovirus infection in infants are defining factors that impact disease progression. We describe the clinical and biological evolution of two cases with Cytomegalovirus (CMV) infection occurring in the perinatal period.
Case reports. Case I. A 3 months-old male infant was admitted to the Clinical Hospital of Infectious and Tropical Diseases "Dr. Victor Babeş" Bucharest in May 2012, for jaundice, hepatic cytolysis, impaired general condition, with suspected CMV disease.
The baby had been born prematurely, with third degree dystrophy; he underwent incubator cure for 5 weeks, he was fed naturally for 4 weeks, with repeated transfusions of red blood cells and platelets in the first month of life, anemia, thrombocytopenia, with moderate hepatic cytolysis identified at 2 months and 3 weeks, moderate hyperbilirubinemia with predominance of direct bilirubin, positive anti-CMV IgM and IgG, positive CMV-DNA, IgG seropositive mother. He received treatment with ganciclovir for 21 days, with favorable clinical and biological evolution.
Case II. A 3 months-old female infant was admitted to the Clinical Hospital of Infectious and Tropical Diseases "Dr. Victor Babeş" Bucharest in June 2012 for hepatocytolysis, digestive disorders with suspected CMV disease.
She was born at term, with a low birth weight for gestation age; she was fed naturally for four weeks, and subsequently received mixed alimentation. The infant was anicteric, with satisfactory general condition, normochromic anemia with moderate hepatic cytolysis identified at three months, positive IgM and IgG antibodies against CMV, positive CMV-DNA, IgG seropositive mother. The baby received symptomatic treatment and displayed a favorable evolution.
Conclusion. We describe how prematurity, low birth weight and breastfeeding may have influenced the CMV infection; the treatment proved to be useful in severe infection.

Cross-contamination through the Dental Laboratory: Risk Assessment

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Background. Many dental maneuvers, including impression taking, imply a certain degree of gingival injury, which causes bleeding. This way, if the impressions are not properly disinfected, the infected blood and oral secretions may be transferred from the dental office to the dental laboratory. This study's aim was to investigate the role of the dental laboratory as hub for cross-contamination between patients from different dental offices.
Methods. We developed a questionnaire which aimed to assess the following parameters: 1) the knowledge of dental technicians on the risk of cross-infection, 2) the current individual practices of dental technicians, and 3) the standard disinfection and maneuvering procedures in dental laboratories. The questionnaires, comprising 13 standardized topics, were filled out by the same investigator, based on the answers supplied by the dental technicians during an interview.
Results. We visited 4 dental laboratories which employed 36 dental technicians, out of which 30 dental technicians agreed to participate in the study. All the persons interviewed were aware of the possibility to get infected from the prosthetic pieces/impressions, but at the same time the majority counted on the dentist to disinfect the prosthetic pieces before sending them to the dental laboratory. Although they were aware that wearing protective gloves should be mandatory when working with non-sterile prosthetic components, they also admitted not wearing them all the time.
Conclusion. Dental laboratories in Bucharest have standard operational procedures in place, which aim to limit the risk of infection transmission to laboratory personnel and to exclude the risk of cross-contamination. However, the individual practices of dental technicians varied to some degree, which may show that there is need for effective programs for monitoring the implementation of the laboratory operating procedures.
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A Case of Giant Rapid Evolving Buschke-Löwenstein Tumor in an Immunocompetent Patient – Case Report

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Background. Giant condylomata acuminata of Buschke and Löwenstein is a rare form of verrucous carcinoma affecting the anogenital region. It is a slowly-growing cauliflower-like tumor with infiltrative growth and destructive behavior, more common in males and immunosuppressed patients. Some of the hallmarks are the high rate of recurrence and malignant transformation. Human papillomavirus has been identified as a contributory factor to the tumor development, together with immunosuppression. Sexually transmitted human papillomavirus DNA subtypes 6 and 11 are regularly found in these lesions, strongly suggesting an etiopathogenic role in tumor initiation and progression. The histology of the Buschke-Löwenstein tumor may appear benign, resembling ordinary condylomata acuminata, although focal malignant transformation may occur spontaneously or following X-ray exposure. High-resolution imaging and a large biopsy are essential for identifying the extent of the infiltration and the presence of squamous cell carcinoma foci.
Case report. We report the case of a 47 year-old male patient with a tumoral lesion that had occurred 18 months before presentation and had been rapidly growing in the last 9 months. The general clinical exam and the laboratory investigations were within normal ranges. Local dermatological exam: large exophytic cauliflower-like tumor masses that infiltrated deeply into underlying tissues located in the anorectum and the external genital areas, with multiple fistulae and anal incontinence. No palpable lymph nodes were found. Repeated HIV testing was negative.
During hospitalization, we performed the excision of the lesion followed by the histopathological exam that confirmed the diagnosis of Buschke-Löwenstein tumor. Because of the high rate of recurrence and the possibility of malignant transformation the patient underwent periodic follow-up visits.
Conclusion. The particularities of this case were the gigantic dimensions of the lesion, the late and advanced presentation and the rapid progression of the tumor in an otherwise immunocompetent patient.

Pathogenic Agents and Therapeutical Management of the Abdominal Wall Post-prosthesis Suppuration

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The meshing of the abdominal wall with textile materials represents today a gold standard in repairing parietal defects known as hernias or eventrations. As this is one of the most frequently performed procedures in a general surgery unit, our study aims to conduct an analysis of this redoubtable complication, but controllable if the pathogenic agent involved is fully identified.
Depending on this parameter, the targeted antibiotic strategy together with a couple of relatively simple surgical maneuvers can lead both patient and doctor to therapeutic success.
The present study makes reference to 9 cases treated over the past 10 years of suppuration developed on a mesh, where therapeutic efficiency was obtained due to the close collaboration between the physician and the microbiologist.

Risk Factors for Acute Kidney Failure (AKI) Specific for Intensive Care

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Acute kidney injury (AKI) is common in critically ill patients and is associated with significant morbidity and mortality. Patients across the spectrum of critical illness have acute kidney injury.
Pathophysiological factors associated with AKI are also implicated in the failure of other organs, indicating that AKI is often part of a multiple organ failure syndrome.
Acute kidney injury in the intensive care unit (ICU) is a clinically relevant problem requiring awareness and expertise among physicians from a wide variety of fields. Although many questions remain controversial and without definitive answers, a periodic update of this rapidly evolving field provides a framework for understanding and managing acute kidney injury in the intensive care unit.
Mechanical ventilation, abdominal distension, use of vasoactive drugs, use of nephrotoxic drugs – all have a great impact on renal function.
The mortality rate remains high despite improved renal replacement techniques. A possible cause of the high mortality rate is that intensive care unit patients tend to be older and more debilitated than before.
The aims of this presentation are to review the specific risk factors of developing AKI in the ICU and the impact of these factors on the outcome of the patients.

Mitral Valve Endocarditis in a Patient with Rheumatoid Arthritis

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Case report. A 62 year-old male patient known with rheumatoid arthritis (with no current treatment) and Hodgkin's lymphoma in complete remission, presented in our unit with ischemic lesions, extensive necrosis and pain of the lower extremities, right hemiparesis. He had no fever at admission. Biological tests: leukocytosis with neutrophilia, high concentrations of BUN, creatinine and procalcitonin. Cranial computer tomography revealed ischemic stroke lesions. At this time point the following diagnostic issues were raised: sepsis, infectious endocarditis, ischemic stroke secondary to vasculitis or to septic emboli. Blood culture was positive (*Staphylococcus aureus*). Transthoracic echocardiography showed a vegetation-free first degree mitral regurgitation. Because of the poor condition of the patient, transesophageal ultrasound couldn't be performed. The final diagnosis was staphylococcal sepsis with presumed cutaneous origin, rheumatoid arthritis complicated with cerebral and cutaneous vasculitis, ischemic stroke. Antibiotic treatment was initiated according to the antibiogram, with favorable clinical and biological evolution after 10 days, followed by pulse therapy with corticosteroids for the treatment of vasculitis. The outcome was favorable and the patient discharged.
Seven days later, he returned with high fever, confusion, diarrhea and acute renal failure. Biologically: leukocytosis with neutrophilia, high serum concentrations of procalcitonin, BUN and creatinine. The blood culture was positive for *Staphylococcus aureus*. Repeated echocardiography confirmed a mitral valve endocarditis with third degree mitral insufficiency. Corticosteroids were withdrawn, and oxacillin and ciprofloxacin therapy was initiated. After 5 weeks of treatment, the patient's condition improved and the fever resolved. He will be further evaluated for the opportunity of mitral valve prosthesis insertion.

Rubella during pregnancy – Obstetrical Management

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Rubella is known as a childhood disease but can be a challenge for the obstetrician and the pregnant woman when the infection occurs during pregnancy. Still there is no unitary approach among the Romanian doctors and the occasions when the pregnant women face rubella infection diagnosis and are puzzled concerning the therapeutic decision are not few.
The majority of rubella-related congenital defects are represented by neurosensorial defects, cardiac malformations and ophthalmic defects. The risk of malformations is almost 90% when the infection appears before 11 weeks of gestation and becomes 0% after 16 weeks of pregnancy.
The risk of infection is 80% in the first trimester, declines during the second trimester and is 100% at 36 weeks. In the last trimester the uterine growth restriction appears to be the only manifestation of the disease. We must make the difference between the risk of infection and the risk of congenital rubella syndrome.

Stress and Anxiety

Iulia Oprea

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Many reports from mental health providers indicate that HIV positive people (and others living with serious medical conditions) are more prone to anxiety symptoms due to the stress of managing their chronic illness. In fact, up to 70% of people with HIV report persistent anxiety symptoms, and up to 40% meet the criteria for an anxiety disorder. Anxiety can be a symptom following initial HIV diagnosis, and anxiety symptoms can frequently recur and escalate in response to disease progression.
Anxiety disorder is a mood disorder that is characterized by excessive and/or nonspecific worries/fears that interfere with the person's life in some overwhelming way. Anxiety disorders are the most common class of mental disorders. It has been estimated that anxiety disorders affect between 5 and 7% of the general population, and up to 30% of people will suffer from an anxiety disorder at least once during their lifetime. Despite the high prevalence rates of these conditions, they often remain under-recognized and under-treated clinical problems.
Anxious individuals fail to control concerns and fears and cannot maintain excessive anxiety to reasonable levels. They describe a significant distress due to diversion of attention to these worries which makes it difficult to perform daily life activities, so there is a decline in important areas of functioning and management of their medical condition.

Corticotherapy in patients with flu-related ARDS

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Influenza is a viral disease common in children and adults. ARDS is a complication with high mortality. Corticosteroids may be a therapeutic step in the management of patients with influenza-associated ARDS. Current evidence shows that corticosteroids have a small role in the acute phase of ARDS and are not indicated in late stage. In this paper we present evidence for and against the use of corticosteroids in ARDS and experience of the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" in their use in flu-related ARDS.

Evaluation of the Efficiency of Antibioprophylaxis in the Prosthetic Surgery of the Abdominal Wall

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As with other surgical fields, in the field of abdominal wall meshing the use of antibiotic prophylaxis has been a matter of controversy.
According to the initial doctrine that antibiotic "protection" is mandatory for any alloplasty, current approaches tend towards selectivity and variation.
Our study is based on an experience in surgery of over 20 years, and focuses on 84 cases operated on over the past 3 years, with a prospective randomized character, divided in two groups, depending on the presence or absence of antibiotic prophylaxis.

The end results argue in favor of the rational and selective use of antibiotics in this type of procedures, the physician's main target being that of identifying the immunocompetent substratum.

Study of Cytomegalovirus Infection in Children

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Background. Cytomegalovirus (CMV) is considered a major etiologic agent of intrauterine infections and congenital malformations. We aimed to evaluate the clinical-evolutionary features of congenital CMV infection in children.
Methods. The study included 52 children with congenital CMV infection. The diagnosis was established based on clinical tests and testing of CMV-DNA in blood and urine.
Results. The clinical features of CMV infection in children were characterized by hepatosplenomegaly in 49 (94.2%) patients, impaired CNS in 40 (76.9%) children and visual disturbances in 4 (7.7%) patients. The viral CMV-DNA load ranged from 523 copies/mL to 32,564 copies/mL, and in children with viral load exceeding 10,000 copies/mL, more severe clinical signs have been observed. All (52) children were administered antiviral treatment: in 38 cases, with acyclovir (Virolex), in 14, with ganciclovir. A month after leaving the hospital, CMV-DNA in the blood was negative in all 14 patients treated with ganciclovir; about half (8 of 14) of them indicated adverse effects (neutropenia, febrile rise, repeated vomiting). A month after antiviral treatment with acyclovir, the viral DNA had disappeared in 34 of 38 cases.
All patients have been monitored through clinical-paraclinical repeated examinations, which indicated the absence of CMV-DNA in the blood of all children in the following 3 months; we identified persistent CMV-DNA in urine up to the age of 5 years in 28 of 52 patients.
Conclusion. Congenital CMV infection in children is clinically characterized by hepatosplenomegaly, affected CNS and visual impairment. The presence of clinical symptoms and viral load remain decisive arguments for initiating antiviral treatment.

The Management of Accidental Exposure to HCV, HBV and HIV for Injuries in the Hospital and Healthcare Sector

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Background. We present statistics of accidental blood exposure in healthcare workers (HCW), assessing: the way of exposure, the exposed health care workers, the source of infection and the given post-exposure prophylaxis treatment.
Methods. We performed a retrospective study of occupational exposure to HBV, HCV, HIV and subsequent post-exposure prophylaxis among healthcare workers at the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest, Romania, from December 2002 to December 2011.
Results. Sixty healthcare workers with a mean age of 36 reported an occupational exposure during a period of 9 years; 54 (90%) were females and 6 (10%) were males. Of the exposed healthcare workers, 48 (80%) were nurses, 7 (11.6%) were doctors and 5 (8.3%) were medical assisting staff. In 49 (81.6%) cases the exposure was percutaneous and in 11 (18.3%) cases the exposure was mucosal/corneal. Ten (16.6%) exposed HCW had insufficient levels of antibody (HBsAb) response, <10 mIU/mL and were considered unprotected, 6 (10%) had titers between 11 and 500 mIU/mL indicating low protection. 31 (51.6%) were considered sufficiently protected (501-1,000 mIU/mL), and 13 (21.6%) of them had very high levels of HBsAb (>1,000 mIU/mL). Sixty patients received post-exposure prophylaxis treatment for HBV, HCV or HIV, and after long-term follow-up (more than 1 year) all the HCW were found negative for HBV, HCV and HIV.
Conclusion. The exposure events analysis in this study corresponds with other previous parallel studies. Nurses had the most frequent exposures and percutaneous injuries are the main way of exposure. Long-term post exposure follow-up revealed a lack of transmission of HBV, HCV, and HIV. Minimizing risks to HCWs for acquisition of blood borne pathogens and correct and rapid post-exposure prophylaxis treatment in case of exposure should be an integral part of infection control and occupational health programs in all healthcare facilities.

The Awareness of the Medical Staff on the Prevention of Viral Hepatitis B in a Geographical Area with High Infection Prevalence

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Background. The attitude of health care professionals in respect to prevention of job risk is important and deserves a better understanding. The aim of this study was to investigate factors determining the attitude and awareness of medical staff in a tertiary medical center for infectious diseases regarding hepatitis B virus (HBV) vaccination, in a region with high prevalence of HBV infection. We also assessed their knowledge about the vaccine, methods of prevention and high risk events.
Methods. The evaluation was carried out by applying a validated questionnaire with 12 items regarding the vaccine against HBV, preventing HBV infection and its consequences, risk factors for acquiring the virus.
The questionnaires were addressed to 100 healthcare workers from the Cluj-Napoca Clinical Infectious Diseases Hospital, Romania, 20 refusing to answer due to personal reasons. There were 80 respondents: 24 male, 56 female aged 26-58 years (mean 42).
Results. The response rate to the questionnaire was 80%. From the 80 respondents, 81% agreed with the vaccination and with the protection/prevention/immunity measures; the other 19% who refused the vaccination were asked to indicate the reasons for this negative attitude. The most frequent reason against vaccination was because they were unconfident about the usefulness of the vaccine (60%).
Conclusion. In our study 81% of the medical staff from a university hospital for infectious diseases in an area with endemic HBV infection agreed with the vaccination for HBV. One fifth refused and need to be convinced to adhere to preventive measures, by a better health education.

Acute viral meningitis in 2007 in the Infectious Diseases Hospital, Ploieşti

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Background. The acute viral meningitis epidemic described started in June 2007 and attainted its maximum in August, with a rise in the number of acute meningitis cases admitted in 2007.

Methods. The retrospective study included 295 cases of acute meningitis hospitalized in the Infectious Diseases Hospital of Ploieşti during 2007.
Results. The study group included 295 subjects, 152 adults and 143 children with an average age for all patients of 20.13 years old, ranging from 9 months to 64 years old. The group included 166 male subjects and 129 female, with equivalent distribution regarding urban vs. rural provenience (170 urban vs. 125 rural area). The onset of meningitis varied from 12 hours to 21 days, on average 2.55 days. The average duration of the hospital admission period was about 12.8 days. We performed 4 transfers (2 cases of *Streptococcus pneumoniae* meningitis, 1 case of *Listeria monocytogenes* meningitis and 1 tuberculous/TB meningitis).
We had 215 cases of lymphocytic meningitis (72.88%), 67 cases of purulent meningitis (22.71%), 1 case of TB meningitis (0.34%), 4 cases of *Leptospira* meningitis (1.35%) – 2 cases with icterohemorrhagic *Leptospira* and 2 cases with unspecified type of *Leptospira* – and 8 cases on unknown etiology of meningitis because they refused CSF examination.
From LM we confirmed 43 (20.38%) with enteroviruses: 39 ECHO4 and 4 with non-polio enteroviruses.
From the cases of purulent meningoencephalitis we identified 14 cases with *Streptococcus pneumoniae*, 5 cases with *Neisseria meningitidis* and 1 case with *Listeria monocytogenes*, 47 cases were with unspecified etiology.
The patients who had lymphocytic meningitis received only corticoids, cerebral depletive treatment and symptomatic medication – 175 cases and 40 cases received for more than 24 hours antimicrobial therapy for associated pathology (acute angina with positive pharyngeal exudate, pneumonia, urinary tract infections).
The patients with purulent meningoencephalitis received antimicrobial therapy with ceftazidime, cefoperazone, ceftriaxone, cefoperazone+sulbactam, ampicillin, ceftriaxone+chloramphenicol hemisuccinate and cefoperazone+sulbactam+chloramphenicol hemisuccinate. Most of cases were mild and moderate forms of meningitis, except for the patients who were moved in others hospitals (2 cases in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest and 1 case in the Clinical Hospital of Infectious and Tropical Diseases "Dr. Victor Babeş", Bucharest, and 1 case in the Ploieşti Pneumophtysiology Hospital).
Conclusion. Most cases occurred in children, teenagers and young adults, with mild predominance of male and urban provenience. We did not register severe complications and deceases. In 2007 we registered the highest number of acute meningitis cases in the history of the Infectious Diseases Hospital of Ploieşti.

Research on the Bacterial Spectrum of Urinary Tract Infections

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Background. *Escherichia coli* is the most frequent pathogen isolated in urinary tract infections (UTI). The aim of the present study was to determine the prevalence of UTI with *E coli* compared to UTI caused by other germs and its evolution in surgical clinics during a period of three years.
Methods. Bacterial isolation and identification were performed using urine samples collected from patients hospitalized in surgical clinics in the Emergency County Hospital of Craiova, between 2008 - 2010.
Results. In 2008, of all the positive urine cultures (441 were isolated, 9.89%) at hospital level, in the surgical clinics we noticed a predominance of UTI with *Escherichia coli* in obstetrics and gynecology (37, 8.39%) and urology (19, 4.31%), while *Klebsiella pneumoniae* was the most frequent pathogen (22, 4.99%) in urology. We determined just a case with *Pseudomonas aeruginosa* (urology), *Citrobacter* (surgery and urology), *Proteus* and *Staphylococcus epidermidis* (obstetrics and gynecology).
In 2009, of the 721 (11.38%) positive urine cultures at hospital level, we observed that *Escherichia coli* was predominant in urology (34, 4.72%) and obstetrics and gynecology (32, 4.44%) clinics. *Klebsiella pneumoniae* was present in 16 isolates (2.22%) from the urology clinic. Also in urology *Pseudomonas aeruginosa* (4, 0.55%) and *Enterobacter* (2, 0.28%) strains were isolated, associated with one *Proteus* strain.
In 2010, of the 786 (12.74%) positive urine cultures at the hospital level, *Escherichia coli* was predominant in urology (79, 10.21%) and in obstetrics and gynecology (42, 5.43%) clinics. *Klebsiella pneumoniae* was also predominant in urology (58, 7.49%), where the most frequent cases of urinary tract infections were with *Proteus* and *Enterobacter* (8, 1.03%), three cases with *Citrobacter* (0.39%), two cases with *Pseudomonas aeruginosa* (0.26%) and one case with *Enterococcus*.
Conclusion. In surgical clinics, uropathogenic *Escherichia coli* was present in the highest percentage in urology, obstetrics and gynecology clinics, due to the risk factors present in these patients.

Pathogenesis and Management of Cerebral Edema

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Cerebral edema is frequently encountered in clinical practice in critically ill patients with acute brain injury from diverse origins and is a major cause of increased morbidity and mortality in the intensive care department.
The consequences of cerebral edema can be lethal and include cerebral ischemia from compromised regional or global cerebral blood flow and intracranial compartmental shifts due to intracranial pressure gradients that result in compression of vital brain structures.
Different pathophysiological mechanisms are responsible for the formation of cytotoxic and vasogenic edema. Yet, these 2 types of edema often coexist and their treatment tends to overlap, with the exception of corticosteroids, which should be only used to ameliorate vasogenic edema.
The overall goal of medical management of cerebral edema is to maintain regional and global CBF to meet the metabolic requirements of the brain and prevent secondary neuronal injury from cerebral ischemia. The medical management of cerebral edema involves using a systematic and algorithmic approach, from general measures (optimal head and neck positioning for facilitating intracranial venous outflow, avoidance of dehydration and systemic hypotension, and maintenance of normothermia) to specific therapeutic interventions (controlled hyperventilation, administration of corticosteroids and diuretics, osmotherapy, and pharmacological cerebral metabolic suppression).
The aim of this presentation is to review and highlight the medical management of cerebral edema based on pathophysiological principles in acute brain injury.

Antibiotics Resistance of Uropathogenic *Escherichia coli*

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Background. The resistance to antibiotics of urinary germs, particularly *Escherichia coli*, is directly associated with their prescription in the primary assistance or in the hospital. The aim of the study was to determine the resistance of uropathogenic *E coli* to some β-lactamic antibiotics and β-lactamic associations with β-lactamase inhibitors.
Methods. The study was performed on a group of urocultures from patients hospitalized in the Emergency County Hospital of Craiova between 2008 - 2010. The antibiotic sensitivity test of uropathogenic *E coli* was performed through the disc diffusion method. The antibiotics tested were: piperacillin, cefoperazone, piperacillin-tazobactam and cefoperazone-sulbactam.
Results. According to the antibiogram, the resistance of uropathogenic *E coli* to the tested antibiotics was:
•In 2008: piperacillin - 5 resistant strains (51.85%), cefoperazone – 11 resistant strains (11.22%), piperacillin-tazobactam and cefoperazone-sulbactam – 0 resistant strains (0.0%);
•In 2009: piperacillin – 166 resistant strains (46.11%), cefoperazone – 110 resistant strains (23.16%), piperacillin-tazobactam – 0 resistant strains (0.0%), cefoperazone-sulbactam – 3 resistant strains (1.34%);
•In 2010: piperacillin – 72 resistant strains (33.96%), cefoperazone – 40 resistant strains (19.61%), piperacillin-tazobactam – 53 resistant strains (27.61%), cefoperazone-sulbactam – 5 resistant strains (2.69%).
Conclusion. The resistance of uropathogenic *E coli* was extremely high for β-lactamic antibiotics such as broad spectrum penicillins (piperacillin), growing as percentage during the course of the 3 years of the study for third generation cephalosporins (cefoperazone). The combination of beta-lactam antibiotics with beta-lactamase inhibitors increases the susceptibility of *E coli* for the combination cefoperazone-sulbactam, which proves the presence of cephalosporinases-secreting bacilli. The sensitivity to the association piperacillin-tazobactam decreased, along the 3 years progressively, which is a paradox, probably due to the presence of other resistance mechanisms than the usual beta-lactamases, such as AmpC type enzymes (CYM-2, FOX-5 or ACT-1), or non-ESBL enzymes such as SHV or TEM.

Aspects of Infection with Coxsackie Viruses in Children – Case Reports

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Background. Coxsackie virus infection can take several clinical forms in children.
Case reports. We present two cases of infection with coxsackie virus treated in our hospital. Case 1: A 7 year old child was admitted for paraparesis and impossibility to maintain the seated posture, and papular rash on the thorax. Neurological examination revealed bilateral absence of OTR and established the diagnosis of polyradiculoneuritis. CSF, MRI and CT were normal. IgA and IgM serology for coxsackie virus were positive. The treatment was with IVIG 400 mg/kg/day for 7 days, with favorable evolution.
Case 2: A German born child was admitted for clinical signs of acute meningitis. Parents refused lumbar puncture. IgA and IgM serology for Coxsackie virus were positive. He was treated with IVIG and depletive drugs. He was discharged on request and readmitted after 24 hours in a Hospital in Frankfurt. There, the CSF had 20 elements/mL, virology negative for CSF viruses. Serology for coxsackie virus was positive. Stool virology was positive for echovirus. The treatment was similar as in Romania.
Conclusion. The clinical consequences of the coxsackie virus infection were more severe in first case, due to the emergence of polyradiculoneuritis. Although both children had positive serology for coxsackie virus, the clinical signs and complications were different.

Pneumonia with *Coxiella burnetii*. Clinical Case Report.

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Background. Q fever is a zoonosis caused by *Coxiella burnetii*, an obligate intracellular bacteria.
Case report. We present the case of a 58 year-old male patient, from rural area, with a history of arthritis. He was admitted in the CF Hospital from Oradea in 05.12.2011, on the internal medicine department.
The patient's symptoms were fever, chills, hot sweats, fatigue, loss of appetite and myalgia.
The paraclinical examinations showed leukocytosis with neutrophilia, increased values of the hepatocytolytic syndrome, and X-ray round opacities bilaterally, in the lower lobes. Blood culture and viral markers were negative. Under various courses of antibiotherapy the fever had persisted, the biological samples increased slightly. That is why the patient was transferred to the Infectious Disease Department of the Municipal Hospital from Oradea.
Focusing on the history we learned that the patient had at home a small pigeon nursery. The serological tests for *Coxiella burnetii* were positive. We administrated doxycycline 2x200 mg/day for 3 days followed by association of doxycycline 2x100 mg/day and ciprofloxacin 2x500 mg/day for 21 days. Under this antibiotherapy associated with symptomatic and hepatoprotective drugs, the patient's condition improved, the fever disappeared after 5 days and all the symptoms after 14 days.
Conclusion. The specific treatment for the infection with *Coxiella burnetii* in this case was doxycycline 2x200 mg/day for 3 days followed with doxycycline 2x100 mg/day and Ciprofloxacin 2x500 mg/day for 3 weeks.
The detailed history of the disease can quickly elucidate the diagnosis.

Acute Pneumonia with *Chlamydia pneumoniae*. Clinical Case Report.

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Background. *Chlamydia* is a genus of intracellular, spherical, Gram-negative bacteria which includes several species: *Chlamydia trachomatis*, *Chlamydia pneumoniae*, *Chlamydia psittaci* and *Chlamydia pecorum*.
Case report. We present the case of a 30 year-old male patient, from urban area, with multiple presentations to the family doctor in the last 6 months, for the following symptoms: fever, chills, frontal.
The patient was admitted in the Infectious Diseases Department of Municipal Hospital from Oradea in February 2012, after many repeated treatments for acute angina. His symptoms were: fever, chills, myalgia in the upper and lower limbs, cough and runny nose. Laboratory tests showed mild leukocytosis with neutrophilia, without significant modifications on chest X-ray. The symptoms disappeared after the treatment with penicillin G 2x2 million IU/day, for 7 days.
The patient was admitted again after 3 weeks, for the same symptoms. At the laboratory examinations we found leukopenia with neutropenia. The serological test (IgM) was positive for *Chlamydia pneumoniae*. The radiological examination showed an interstitial pneumonia.
The patient was treated with amoxicillin+clavulanic acid (amoxiplus) 3x1.2 g/day i.v. associated with clarithromycin 2x500 mg/day p.o. Because the fever persisted after 5 days, the treatment was changed to

clindamycin 3x600 mg/day i.v. associated with ciprofloxacin 2x200 mg/day i.v. and the symptoms disappeared after 11 days.
Conclusion. *Chlamydia pneumoniae* was resistant to clarithromycin in this case. The best treatment was with clindamycin and ciprofloxacin.

Characteristic Modifications of Cytokines and Features of Allergic Reaction Mediators in Patients with Various Forms of Toxocariasis

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Background. A number of cytokines are directly involved in parasitic granuloma formation, for example interleukin 4 (IL-4). Tissue eosinophilia in this case depends on IL-5. Serotonin and histamine are mediators that play an important role in triggering allergic and inflammatory reactions.
Methods. During the study we examined and analyzed the character and type of the modifications of certain cytokines that play a very important role in infections with *Toxocara canis* (IL-2, IL-4, IL-5, IL-8), and of allergic mediators (histamine and serotonin). The study involved 83 patients with various forms of toxocariasis. The main batch of patients (52 patients) had toxocariasis associated with respiratory system disorders – TAR (bronchitis and asthma): the control group – (T) toxocariasis without pulmonary symptoms (31 patients).
Results. This study demonstrates a mixed type of immune response (Th1-Th2) in the main group of patients. Patients in the control group had type Th2 immune reactions. The mixed type of immune reaction (Th1-Th2) in the main batch determined positive dynamics of the examined parameters (IL-2, IL-4, IL-5, IL-8) and allergic mediators (histamine and serotonin). Also, in this group, the immunoregulatory index (CD4/CD8), the antibodies against *T canis* (anti-Toxo IgG), and the adaptation accommodation index had a positive dynamic.
Conclusion. In the control patients' group, where we observed a type Th2 immune reaction, most cases showed only a small inclination to improvement of the studied parameters. In this group we observed a significant increase of the immunoregulatory index, which can indicate continuous increase of allergic factors in these patients; antibodies against *T canis* decreased to a lesser extent, and adaptability indicators followed only an improvement trend.

Clinical Aspects, Diagnosis and Treatment of the Cytomegalovirus Infection

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Background. Cytomegalovirus infection is spread all over the world. Up to 80-100% of the population under 40 years have antibodies for this virus, similar figures being recorded in the Republic of Moldova.
Methods. The study refers to a group of 32 adult patients admitted to the Clinical Hospital of Infectious Diseases "Toma Ciorbă". The diagnosis of infection with CMV was confirmed by the serological examination through the ELISA test revealing anti-CMV IgM and IgG, and CMV-DNA by PCR.
Results. The clinical picture of CMV infection was characterized by an acute onset in 17 (53.13%) the patients. Clinical symptoms were: fever in 10 (31.25%) patients, chills in 4 (12.5%) patients, asthenia in 30 (93.75%), headaches in 10 (31.25%), dizziness in 7 (21.88%), myalgia in 5 (15.63%), perspirations in 3 (9.38%), lymphadenopathy in 20 (62.5%) out of which 7 (21.88%) had generalized lymphadenopathy; hepatomegaly in 100% of patients, splenomegaly in 18 patients (56.25%). Dyspeptic syndrome manifested by nausea was present in 18 cases (56.25%), vomiting in 7 (21.88%) and diarrhea in 4 patients (12.5%).
Complete blood count showed: leukopenia in 7 patients (21.88%), lymphocytosis in 14 (43.75%). The ESR was accelerated in 31.25% of the cases. Biochemical tests: heightened ALT in 17 cases (53.13%) and heightened AST in 12 (37.5%) patients.
The diagnosis of infection with CMV was confirmed by the serological examination (ELISA). Three (9.38%) patients had anti-CMV IgM, 26 (81.25%) patients had anti-CMV IgM and IgG and 3 (9.38%) patients were positive for CMV-DNA (PCR).
Ten patients (31.25%) required antiviral treatment. The evolution of the disease was favorable in all the patients.
Conclusion. Mononucleosis syndrome was present in 20 patients (62.5%); hepatomegaly was noted in all the patients with altered biochemical tests, in 53.13% of the patients, and splenomegaly in 18 (56.25%) patients. The diagnosis was confirmed by PCR and by specific tests revealing anti-CMV IgM, IgG.

Intensive Therapy for Critical Patients with CSF Fistula. Case presentation

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Case report. A 65 year-old female patient with a history of operated CSF fistula and an episode of pneumococcal meningitis 5 months back was hospitalized at the Infectious Diseases Hospital "Sf. Parascheva", Iaşi for recurrence of febrile syndrome. CSF examination: purulent appearance, 3000 elements/cmm with PMN=95%. We started treatment with ceftriaxone 4g, ciprofloxacin 400 mg. The patient's condition worsened gradually and she was intubated and mechanically ventilated. *Streptococcus pneumoniae* was identified in the CSF and also in blood cultures establishing the following diagnosis: sepsis with *Streptococcus pneumoniae* with meningitis determinations. The therapy was changed: meropenem 3g, vancomycin 2g. The patient's condition improved and she was detubated. On the CSF examination that followed, the number of elements was maintained despite long-term antibiotic therapy; treatment was reshuffled to include corticosteroids in monotherapy.
Conclusion. Corticosteroids in monotherapy can be a solution for meningitis cases due to lack of contiguous anatomical elements that separate the subarachnoid space from the nasal and sinus cavities in association with long-term antibiotic treatment, repeatedly reshuffled. Superinfection of sealing materials in a patient with a history of operated CSF fistula must be taken into account for any patient with this pathology and supervision in the intensive care unit associated to the periodic examinations of the cerebrospinal fluid and CT exams are crucial for the correct management of the disease. Interdisciplinarity is a must for correct assessment and determining the optimal treatment regimen for patients with complex pathology.

Persistent Meningitis in a Patient with Cranio-sphenoidal Fistula and CSF Flow Obstruction

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Background. Complications of bacterial meningitis may produce important neurological and neurocognitive sequelae with impairment in the quality of life (Montreal Cognitive Assessment Score=22 points, Hamilton Scale=22 points). We aimed to determine the cause of persistent meningitis for more than 3 months.
Case report. A 65 year-old female was diagnosed in May 2012 with acute *Streptococcus pneumoniae* meningitis. The patient had a background of cranio-sphenoidal fistula due to a traffic accident with cranial trauma (closed in 2004). She was referred to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" for recurrence of fever and dizziness at interruption of antibiotics and for persistent CSF abnormalities during current treatment.
The neuroimaging studies (MRI with contrast enhancement) revealed important inflammation of the sphenoidal sealing material, multiple intrathecal thickenings leading to obstruction in the whole spine and hydrocephaly.
Periodic imagistic evaluation showed decrease of the sphenoidal sealing patch inflammation, but persistence of hydrocephaly. Serial evaluations of the CSF showed improvement under antibiotics and steroids treatment. The mental status of the patient remained unchanged even when the biological inflammation diminished and the MRI result was favorable.
Conclusion. CSF permeability on sphenoidal level with infection of sealing material provides the reason for persistence of meningitis. High CSF protein concentration due to pneumococcal meningitis may be responsible for the appearance of multiple seclusions with secondary alteration of CSF dynamics. All these have repercussions on the mental status: depression and impaired cognition. They have persisted after 1 month of stopping treatment.

Neuromonitoring in Intensive Care

Bogdan Pavel, Alexandru Nica, Alina Frangulea, Viorica Vasile, Cătălin Apostolescu, Cleo Roşculet, Monica Ivan, Ana-Maria Petrescu, Cornel Camburu, Marius Radu, Andrei Rogoz, Doina Iovănescu

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Monitoring the injured brain secondary to systemic sepsis or infections of the central nervous system is an integral part of the management of patients in intensive care. Brain-specific monitoring techniques enable focused assessment of secondary insults to the brain and may help the intensivist in making appropriate interventions guided by the various monitoring techniques, thereby reducing secondary brain damage following septic brain injury.
This review explores methods of monitoring the injured brain in an intensive care unit, including EEG analysis, techniques of cerebral blood flow assessment, including transcranial Doppler ultrasonography, near-infrared spectroscopy (NIRS), measurement of intracranial pressure and evoked potentials.
Various modalities are available to monitor nervous function, including EEG analysis, intracranial pressure, and to assess cerebral blood flow in the septic injured brain in intensive care units. Knowledge of advantages and limitations of the different techniques can improve outcome of patients with acute brain injury.

Sensitivity to Antibiotics of Certain Strains Isolated in the Emergency Military Hospital, Cluj-Napoca during the Past 20 Months

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Background. In any general hospital infections represent a permanent challenge for clinicians and we need to know the circulation of the microbial strains, (community acquired and nosocomial).
We aimed to determine the antibiotic resistance pattern in the main strains isolated from the hospitalized patients in the last 20 months in the Emergency Military Hospital in Cluj.
Method. We performed a retrospective study of the microbiologic results for the main strains isolated from the patients hospitalized between 01.01.2011 and 31.08.2012 in our hospital with urinary tract infection and bacteremia (other localizations were less frequent and less investigated). For antibiogram we used the diffusimetric method, and some strains were tested with VITEK 2. The tested strains were isolated from blood and central lines, and from urinary samples.
Results. We performed a great number of urocultures because the test is easy to perform (it is done to almost every admitted patient) and urologic patients are common.
From 728 positive urocultures, we isolated 483 *E coli*, 107 *Enterococcus*, 37 *Staphylococcus*, 16 *Enterobacter*, 15 *Proteus*, 12 *Pseudomonas*, 7 *Acinetobacter* .The mean age was 74.1 years.
From 28 positive hemocultures, we isolated 13 *Staphylococcus*, 10 *E coli*, 2 *Enterobacter* and *Klebsiella*, 1 *Proteus*, and from 10 positive central line cultures we found 5 *Klebsiella*, 2 *Staphylococcus*, 2 *Burkholderia* and 1 *Acinetobacter*.
Conclusion. In order to have a proper etiological diagnosis, it is important to have a good sample, from the correct place and in the correct moment.
There are regional differences between the antibiotic susceptibility and we need to know the local pattern to choose the first intention antibiotic. For comparable results we need to standardize the laboratory techniques and to follow the procedures.

Left Ventricular Dysfunction in Septic Shock

Alexandru Nica, Alina Frangulea, Viorica Vasile, Bogdan Pavel, Cătălin Apostolescu, Cleo Roşculet, Monica Ivan, Ana-Maria Petrescu, Cornel Camburu, Marius Radu, Andrei Rogoz, Doina Iovănescu

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Myocardial depression is a well-recognized manifestation of organ dysfunction in sepsis. Due to the lack of a generally accepted definition and the absence of large epidemiologic studies, its frequency is uncertain.
Recent advances in echocardiography have allowed better characterization of septic cardiomyopathy. Echocardiographic studies suggest that 40% to 50% of patients with prolonged septic shock develop myocardial depression, as defined by a reduced ejection fraction. Sepsis related changes in circulating volume and vessel tone inevitably affect cardiac performance.
Although the coronary circulation during sepsis is maintained or even increased, alterations in the microcirculation are likely to occur. However, clinical studies have demonstrated that myocardial cell death is rare and that cardiac function is fully reversible in survivors.
Unlike in classic cardiomyopathy, it is not associated with high filling pressures, for two reasons: improvement in the compliance of the left ventricle and associated right ventricular dysfunction.
Although it is unclear to which extent it affects prognosis, a hyperkinetic state is indicative of a profound and persistent vasoplegia associated with a high mortality rate.
The purposes of this presentation are to review the mechanisms underlying sepsis-induced cardiac dysfunction, the monitoring tools for these patients and the optimal hemodynamic support, mandatory for improving outcome.

Metabolic Aspects in Sepsis

Viorica Vasile, Alina Frangulea, Alexandru Nica, Bogdan Pavel, Cătălin Apostolescu, Cleo Roşculet, Monica Ivan, Ana-Maria Petrescu, Cornel Camburu, Marius Radu, Andrei Rogoz, Doina Iovănescu

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Sepsis is a leading cause of mortality in critically ill patients. The pathophysiology of sepsis involves a highly complex and integrated response, including the activation of various cell types, inflammatory mediators, and the haemostatic system.

The past several years have seen remarkable advances in understanding the basic cellular and physiologic mechanisms underlying organ dysfunction and recovery relating to sepsis.

Although several new therapeutic approaches have improved outcome in septic patients, the far-reaching potential of these new insights into sepsis-associated mechanisms is only beginning to be realized.

Regional tissue dysoxia caused by microcirculatory dysfunction leading to mitochondrial depression underlies the condition in sepsis where despite correction of systemic oxygen delivery variables, regional dysoxia and a deficit in oxygen extraction persist. This condition is termed the microcirculatory and mitochondrial distress syndrome.

The purpose of this presentation is to review new concepts in sepsis hoping that more understanding of pathophysiology will improve the clinical outcome of septic patients.

SESSION 3. *Clostridium difficile* infection: new concepts and new options for diagnosis and management

Oral presentations

Clostridium difficile Infection: an Old Problem with New Challenges

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Background. We performed a study to identify demographic, clinical and biological patterns in patients diagnosed with *Clostridium difficile* CDI admitted to the Adults III Department of the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest.
Methods. A retrospective study was performed on 40 patients with *Clostridium difficile*-associated disease (CDAD) between January and August 2012. Demographic characteristics, clinical and laboratory data, co-morbidities, management and evolution of CDAD were studied. Statistical analysis was performed using IBM-SPSS Statistics v.17.0.
Results. Forty patients with CDAD were included in the study. Twenty-five patients were >65 years old and 15 patients were <64 years old (mean age of the study population: 65.3 ± 15.9 years). M/F ratio was 0.53. Thirty-five patients had underlying pathology out of which: 7 neoplasms, 2 in chemotherapy, 3 recent gastrointestinal surgery, 1 with endotracheal intubation. Most patients (87.5%) had previous hospitalizations and 40% had received cephalosporins and/or fluoroquinolones. More than half of patients (62.9%) had severe CDI. The mean age for severe cases was significantly higher than that for mild cases (71.8 vs. 62 years, p=0.03). Seven cases had protein-losing enteropathy with ascites out of which 3 were younger patients. Electrolyte imbalances were observed in 15 cases and 6 cases had renal failure.
Procalcitonin was positive in 5 cases and C-reactive protein was intensely positive in 23 cases. Almost half of the patients (42.1%) had marked leukocytosis (>15,000/cmm). There were 2 deaths and 10 relapses.
Conclusion. Following the introduction of large scale antibiotherapy, there has been a significant increase in CDAD. We report a higher percentage of severe cases in older patients.

Clostridium difficile Infections Hospitalized in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest, Romania

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Background. In Romania the incidence of *Clostridium difficile* infections (CDI) is largely under-evaluated. We aimed to determine the clinical aspects and evolution of the patients with CDI hospitalized in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest.
Methods. We retrospectively listed the patients discharged from our hospital during three consecutive months (January to March 2012) and we retained for the final analysis 93 cases considered as CDI or "probable CDI".
Results. The monthly mean number of cases is about six times higher than in the same period of 2011: 31 cases vs. 4.8 cases/month), p<0.001. In the studied group there were more women (55.9%), and the average age was 65.2 years (22-93 years). In 75.3% of the cases cultures were positive, suggestive changes for CDI were detected in 50.5% of the colitis cases in the stool exam. Seventy-four cases were healthcare facility-associated, 10 cases were community-associated, and the other 9 cases were classified as indeterminate. At least 60.2% of the patients had received antibiotics recently and 33.3% of the patients had undergone recent surgery. Relapses were recorded in 11 patients (11.8%), 95% CI 6.7-19.9%. Ten (10.75%) deaths were recorded in patients with a mean age of 78.4 years and with an average value of ATLAS score of 5.9 versus a 3.39 value in survivors, p=0.00012. In 6 of the deceased patients the procalcitonin was higher than 0.5 ng/mL. In patients with increased levels of procalcitonin, systemic antibiotics were associated; when compared with carbapenems, the use of tigecycline significantly improved the outcome (p=0.04, Fisher's exact test).
Conclusion. CDI incidence increased when compared with the previous year. ATLAS score proved to be useful in assessing the evolution of this infection.

Poster presentations

Fungal sepsis and *Clostridium difficile* diarrhea in an elderly patient with multiple comorbidities

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Case report. A 69-year-old male patient was referred to the National Institute for Infectious Diseases (INBI) from another tertiary-care hospital in Bucharest in April 2012 with diarrhea, asthenia and anasarca. He was on peritoneal dialysis since September-2011 (four sessions/day) for end-stage-renal-disease and also presented type-two-diabetes, cardiac insufficiency, arterial hypertension and chronic-obstructive-pulmonary-disease. In the week prior to being referred to INBI, he had received antibiotic-treatment: amoxicillin plus clavulanic acid followed by ciprofloxacin, clindamycin and metronidazole plus vancomycin and fluconazole.
Upon admission, we diagnosed fungal sepsis with multisystem-organ-failure (MSOF). Direct-microscopy detected yeasts in stool, urine and tongue-swab. The test for (1,3)-β-D-glucan was positive (370 pg/mL). PLEX-ID *(Abbott,USA)* for *Clostridium difficile* revealed a virulent B-toxin secreting strain (tcdB+) with tcdC 18bp deletion and tcdC promoter deletion. The patient was immediately started on meropenem and caspofungin, continuing metronidazole plus vancomycin, with daily monitoring of stool, urine, tongue-swabs and sputum for yeasts. He displayed a favorable evolution and was discharged after three weeks, with recommendations for optimal home hygiene and treatment with vancomycin and posaconazole.
After five days, the patient returned with fever, altered clinical state and diarrhea. Stool and urine samples were positive for yeasts and stool samples were also positive for *Clostridium difficile*. His treatment was again changed to metronidazole plus vancomycin and caspofungin, with favorable evolution. For epidemiologic purposes, we tested family members in close contact for *Clostridium difficile*; all tests were negative.
He was discharged after 18 days, with persistently-negative stool, urine and sputum tests for yeasts, with vancomycin treatment for another 20 days, with progressive dose decrease. At the end-of-treatment check-up, he was fungus-free and *Clostridium difficile*-free, with a decreased number of dialysis sessions and improved respiratory and cardiac functions.
Conclusion. This case reflects the importance of managing comorbidities, which can only be performed by multi-disciplinary teams. It is literally vital to establish a prompt diagnosis and start therapy early in fungal sepsis and *Clostridium difficile* infection. Recent sepsis studies have revealed the tremendous importance of the first choice of therapy, with favorable results particularly in cases that received the appropriate drug from the beginning, and not as a result of changing and adapting therapy.

Bacterial and Invasive Fungal Infections and *Clostridium difficile* Diarrhea in a Patient with Multiple Myeloma

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Background. *Clostridium difficile* may cause substantial morbidity and mortality in hospitalized patients. One of the risk factors for fungal sepsis is indwelling intravascular or urinary catheters.
We studied the clinical features, biological data and risk factors for bacterial and invasive fungal infection in a patient with *Clostridium difficile* infection (CDI) and multiple myeloma (MM).
Case report. A 79 year-old female patient was admitted in August 2012 to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" for watery diarrhea. She had IgG kappa MM in remission. Three weeks back, she had been hospitalized in our institute for respiratory sepsis and had had received antibiotic treatment.
Five days after discharge she developed 3-4 watery stools. Relevant laboratory studies included positive procalcitonin and C–reactive protein and a stool culture positive for *C. difficile*. She had hemodynamic instability, renal failure and severe electrolyte imbalances. A Foley catheter and a central venous catheter on the right femoral vein were inserted for fluids and electrolytes replacement. She received metronidazole and vancomycin treatment.
After seven days she became febrile with bloodstream culture positive for *Pseudomonas aeruginosa* and three species of *Candida* nonalbicans. She received treatment with meropenem and anidulafungin, but developed severe thrombocytopenia and hypokalemia, and died on the 17th day of hospitalizations.
Conclusion. We suggest that in CDI immunosuppressed patients, nonalbicans candidemia and bacterial bloodstream infections may occur frequently, especially in those with invasive devices, and may be associated with higher mortality.

Clostridium difficile infections – the experience of the Infectious Diseases Department of Suceava

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Background. *Clostridium difficile* is the most important cause of nosocomial diarrhea in adults, but in the last years the literature described some cases of community-acquired *Clostridium* infections. In the Infectious Disease Department of the Suceava County Hospital were admitted in the past 9 months a significant number of patients with *Clostridium difficile* infection.
Method. This is a retrospective analysis of the cases with *Clostridium difficile* infection from January 1, 2012 to September 15, 2012. We studied epidemiological, clinical, laboratory and therapeutic data.
Results. We analyzed 33 cases of patients with prolonged diarrhea, after antibiotics therapy. We excluded 10 of them in which we had insufficient data to sustain *Clostridium difficile* infection. Most of the patients where elderly, with recent surgical interventions. There were various forms of the disease from mild to very severe ones with fatal outcome (4 cases). The therapy included rifaximin and metronidazole (orally) for mild cases, glycopeptides (orally) ± metronidazole intravenously for medium severity cases and the association of carbapenems or tigecycline for the severe cases. In a few cases we observed recurrences.
Conclusion. *Clostridium difficile* infection is frequently under-diagnosed. The laboratory data rise a few problems: a negative stool culture does not exclude the *Clostridium difficile* infection; the toxin identification has a various sensitivity between 50-80%; the coprocytogram witch identifies sporulated Gram-positive bacilli has a high orientative value. Misrecognition of this infection can lead to

late diagnosis, the most frequent complications being the severe dehydration syndrome and the hydroelectrolytic abnormalities; the most severe ones were toxic megacolon, peritoneal abscesses acute peritonitis, acute renal failure, multiple system organ failure, intravascular coagulation, deep vein thrombosis. These patients needed a prolonged hospitalization with high medical costs.
It is easier to prevent than to cure, and this is why measures for the limitation of the extension of these nosocomial infections are very important.

Repeated Systemic Infections in an Immunodepressed Patient – a Case Report

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Background. Immunocompromised patients are very responsive to infections, sometimes with severe and repeated evolution, that can cause problems in diagnosis, multidisciplinary approach and therapy.
Case report. An 82 year-old patient from Constanţa had a surgical intervention in Bucharest, for colon neoplasia and after two weeks developed acute enterocolitis with *Clostridium difficile*, treated in the same clinic where he had the surgical intervention, two weeks with vancomycin plus metronidazole. He left the hospital and the evolution was good for one week; after that he had again fever and diarrhea, and was hospitalized in the Clinical Hospital of Infectious Diseases, Constanţa.
At admission, he had no abdominal pain; we performed the usual laboratory tests, a complete bacteriological investigation, including the *Clostridium difficile* toxin, abdominal CT.
The results showed leukocytosis with neutrophilia (22.000 WBC/cmm with 85% neutrophils), increased ESR, increased fibrinogen, anemia (Hb 10.8 g/dL), normal renal and hepatic function, severe hyponatremia and hypokalemia, normal glycemia, negative tests for *Clostridium difficile*, negative blood cultures. Coprobacteriological exams showed mixed infection with *Klebsiella* and *Proteus*, both sensible to meropenem. Abdominal CT examination showed a small fluid collection and partial anastomotic dehiscence on the site of the surgical intervention.
We contacted the surgeons, who considered that the anastomosis was satisfactory and that it did not require a new surgical intervention. We started therapy with meropenem 1g (intravenously)/8 hours, hydroelectrolitic replacement, probiotics; the evolution was good for one week, but the fever and diarrhea reappeared. Colonoscopy showed the presence of some inflammatory areas.
Therapy: Tygacil+Caspofungin for 7 days, hydro-electrolitical replacement, probiotics, with good evolution.
Conclusion. The patient required careful supervision, being susceptible to digestive infections with systemic manifestations. The diagnosis can sometimes be difficult and the necessary therapy needs to be combined (antibacterial, antifungal) efficient, adequate, maintained.

SESSION 4. Update in the diagnosis of difficult to treat infections

Oral presentations

PCR and Mass Spectrometry – A New Diagnostic Method for Infectious Diseases

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Background. Rapid and accurate identification of the causative microorganism is imperative in severe infectious diseases.
Our objective was to assess the value of broad-range PCR and electrospray ionization mass spectrometry (ESI-MS) in microbial identification and virulence markers detection in clinical samples from critically ill patients.
Methods. We performed an analysis of clinical sample types, microbial species and virulence markers identified in all patients tested with PCR/ESI-MS in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" from December 2011 to September 2012.
Results. A number of 541 patients were tested with PCR/ESI-MS. Various clinical specimens were analyzed: blood, cerebrospinal fluid, bronchoalveolar lavage, pleural effusion, peritoneal effusion, pus. A broad range of bacteria (*Staphylococcus aureus*, *Streptococcus pneumoniae*, *Listeria monocytogenes*, *Neisseria meningitidis*, *Escherichia coli*, *Klebsiella pneumoniae*, *Serratia marcescens*, *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, *Stenotrophomonas maltophilia*, Bordetella pertussis, *Legionella pneumophila*, *Coxiella burnetii*, *Chlamydia psittaci*, *Mycobacterium tuberculosis*) was identified with a single assay, Plex-ID BAC detection. Various viruses (herpesvirus 1, 2, 3, 4, 5, polyomavirus JC and BK, adenovirus, parvovirus, enterovirus) or fungi (*Aspergillus*, *Candida*, *Fusarium*, *Scedosporium*, *Saitoella*) were identified with the Plex-ID Broad Viral assay or Plex-ID Broad Fungal assay.
Conclusion. PCR/ESI-MS (Plex-ID) is a reliable method for identification of a wide range of microorganisms in various clinical specimens.

PCR Coupled with Electrospray Ionization and Mass Spectrometry vs. Real-time PCR in Detection of *Mycobacterium tuberculosis* Resistance Mutations to Rifampin and Isoniazid

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Background. Rapid identification of *Mycobacterium tuberculosis* resistance is needed to treat promptly and to limit the transmission of drug-resistant strains.
The objective of our study was to compare the results obtained by a real-time PCR (RT-PCR) based technique with broad-range PCR coupled with electrospray ionization and mass spectrometry (PCR/ESI-MS) for the prediction of phenotypic resistance of *M tuberculosis*.
Methods. A subpopulation of 47 isolates (38 susceptible, 6 resistant to both isoniazid (INH) and rifampin (RMP), 1 mono-RMP resistant and 2 resistant to INH only) from 67 (26 drug-resistant and 41 drug-susceptible) isolates previously tested by RT-PCR have been tested by PCR/ESI-MS. Phenotypic testing was performed by the absolute concentration method. We compared PCR/ESI-MS and RT-PCR with culture-based drug-susceptibility testing and we assessed inter-test agreement between PCR/ESI-MS and RT-PCR by calculating Cohen's kappa (k).
Results. Using RT-PCR the sensitivity (Se) and specificity (Sp) of the rapid detection of mutations for INH were 88% (95% CI: 65-100), and 89% (95% CI: 76-100), respectively. Regarding the RMP resistance, Se and Sp were 86% (95% CI: 60-100%), and 75% (95% CI: 56-94%), respectively. The Se and Sp of the rapid detection of mutations for INH by PCR/ESI-MS were 100% (95% CI: 100-100), respectively 95% (95% CI: 88-100). Regarding the RMP resistance, Se and Sp were 86% (95% CI: 60-100), and 95% (95% CI: 88-100) respectively. We found substantial agreement between PCR/ESI-MS and RT-PCR k=0.74 for INH and k=0.66 for RMP.
Conclusion. Molecular techniques might be promising in the rapid detection of mutations associated with resistance.

PLEX-ID in the Diagnosis of Viral CNS Infections

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Background. The central nervous system (CNS) can host many micro-organisms, especially in patients with immune suppression, without it being necessarily clinically apparent. Viruses are particularly difficult to detect using conventional techniques.
We aimed to determine the presence of certain viruses in the CNS and to correlate the viral presence with a possible CNS impairment.
Methods. On-going prospective study which includes HIV positive patients irrespective of the presence/absence of CNS involvement. CSF was analyzed using the viral PLEX-ID Broad-Viral kit. This kit

simultaneously identifies herpesviruses, polyomaviruses, adenoviruses, parvoviruses and enteroviruses.
Results. We assessed the CSF of 22 patients, in 13 of them none of the above-mentioned viruses could be identified.
Eight out of 13 were without clinical CNS involvement while in the other 5 CNS involvement was due to other causes.
Nine patients had viruses detected in the CSF, with documented CNS involvement in 6 cases.
One case of JCV with characteristic clinical and imaging findings was identified.
In 7/9 cases EBV was detected. In 5/7 patients at least one other microorganism was identified simultaneously: cytomegalovirus (CMV), *Mycobacterium tuberculosis* (MTB), *Toxoplasma*, human herpes simplex 1 (HHV1) and/or HIV with viral load in CSF above the plasmatic one. These co-existences are: EBV+CMV+MTB+HIV; EBV+CMV+HIV; EBV+MTB; EBV+*Toxoplasma*; EBV+HHV1. One case with coexisting EBV subsequently developed CNS lymphoma.
Conclusion. PLEX-ID is a useful laboratory tool which can significantly reduce the time and expand the diagnostic possibilities in central nervous system viral infections, for bacterial, viral or fungal infections.

Update in Nanobiotechnology Therapeutics of Viral Infections

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The use of nanotechnology in medicine offers some exciting possibilities. Some techniques are only imagined, while others are at various stages of testing, or actually being used today. Nanotechnology in medicine involves applications of nanoparticles currently under development, as well as longer range research that involves the use of manufactured nanorobots to make repairs on cellular level (sometimes referred to as nanomedicine). The use of nanotechnology in the field of medicine could revolutionize the way we detect and treat or prevent damage to the human body involved in infectious disease in the future, and many techniques only imagined a few years ago are making remarkable progress towards becoming reality. We summarize the updates relating nanotechnology devices used in the modern therapy of viral infections: cell decoys and other biomolecular procedures.

Poster presentations

Acute Encephalitis Complicating Rubella

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Background. Rubella is a viral illness that usually occurs in the pediatric population, but it can also occur in adults. Neurological complications are rare, varying from 1/3000 to 1/24000 and the mortality is usually low.
We assessed the clinical and paraclinical aspects of encephalitis in young adults during an epidemic of rubella in the south of Romania between January and April 2012.
Methods. We performed a retrospective case series study of 10 encephalitis cases proven to be due to rubella.
Results. We studied 8 men and 2 women with a median age of 15 years without specific immunization, who presented with an encephalitis clinical picture; 8 patients required mechanical ventilation. Cerebrospinal fluid (CSF) characteristics were nonspecific. Imaging of the brain was within normal limits in 9 patients and in one patient it revealed minor changes. The diagnosis was sustained by serum and CSF immunoglobulin M antibodies against rubella virus. PLEX ID from the CSF revealed the genome of herpesviruses in 4 patients suggesting some hypothesis about physiopathology. All patients survived, and their condition improved quickly within 7 days. At two and six months follow-up, the patients had recovered fully.
Conclusion. During the epidemic, the incidence of rubella encephalitis in our institute was 0.27%. The average onset was within an interval of 4 days from the appearance of the rubella rash. Despite coma and convulsions the prognosis was good with full recovery. We emphasize the importance of vaccination in preventing severe complications such as encephalitis. Studies should be performed in order to identify a possible viral mutation or coinfections that could explain this rare complication of rubella infection.

Diagnostic Pitfalls of an HIV Positive Patient

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Case report. We present the case of an HIV-positive patient from the 1990s cohort with multiple comorbidities, multi-experienced and with poor adherence to antiretroviral therapy.
Our theme includes clinical and biological evolution and therapeutics of a 23 year-old male diagnosed with HIV-infection at 4 years old, in our care since 1995. He was frequently hospitalized for various lung, heart, digestive and renal diseases and had multiple antiretroviral regimens. Although he had poor adherence to antiretroviral therapy, the nadir CD4 count was not lower was 226 cells/mL. In May 2012 he was admitted in our clinic for laterocervical adenopathy followed by generalized tonic-clonic seizures, right post-critical hemiparesis and coma. Salvage therapy – a complex regimen which included new classes of antiretrovirals – offered a new chance to the patient. HHV4 serology was positive and acute leukoencephalitis was suspected, but the neurological evolution was favorable. Ganglion puncture was performed, and PCR PLEX-ID was positive for multidrug resistant *Mycobacterium tuberculosis*.
Conclusion. The diagnostic difficulties encountered in this patient were due to an individual pattern. It is necessary to evaluate and to improve patient adherence to a complex therapeutic regimen (ARV and antituberculous treatment).
Patients from the 1990s cohort are difficult to manage due to the emergence of multidrug resistant infections and a poor adherence to antiretroviral treatment in the case of a complex long-term treatment.

SESSION 5. HIV infection: new concepts and new treatment options

Oral presentations

Main Factors Associated with Unfavorable Clinical Evolution of *C neoformans* Infection in HIV Positive Patients

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Background. The risk of death from cryptococcosis in HIV infected patients remains high (35-65%) despite the progress of highly active antiretroviral therapy (HAART). We aimed to identify factors associated with unfavorable clinical evolution of *C neoformans* infection in patients with HIV.
Methods. Retrospective analysis of cases of cryptococcosis in HIV-positive patients recorded in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" between January 2000 and June 2012. We identified statistically significant factors associated with fatal outcome or progression of disease.
Results. 56 episodes of *C neoformans* infection occurred in 41 patients. Of these, 27 (65.9%) patients progressed to aggravation of symptoms or death. The main factors associated with poor outcome were: baseline CD4 lymphocytes below 50 cells/cmm (41.8 cells/cmm vs. 85.6 cells/cmm in those with favorable outcome), minimal changes in the cerebrospinal fluid (CSF) at baseline (average number of CSF elements of 8.2 cells/cmm versus 93.9 cells/cmm in those with favorable outcome; mean proteins level of 89.3 mg/dL vs. 113.1 mg/dL in those with favorable outcome), increased microbial load expressed through a higher proportion of positive results for China ink stain from the CSF sediment (95.8% vs. 70%, p=0.02) and higher percentage of positive CSF cultures (62.5% versus 20%, p=0.005), reduced susceptibility to fluconazole (all patients who died had strains with reduced susceptibility or resistance to this azole).
Conclusion. In our analysis the main statistically significant factor associated with poor outcome was a high microbial load in the CSF at baseline.

Factors Associated with Unfavorable Clinical Outcome in HIV-TB Coinfected Patients

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Background. The importance of tuberculosis (TB) has been recognized early in the development of the current HIV pandemic. However we still have unsolved issues regarding the diagnosis and proper management of *M tuberculosis* infection.
The objective of this study was to identify factors associated with unfavorable clinical outcome in patients with HIV-TB coinfection.
Methods. Retrospective analysis of clinical and therapeutic aspects in patients with confirmed HIV-TB coinfection during 2000-2012. We compared factors associated with a favorable evolution vs. those with fatal outcome.
Results. 63 patients developed TB during the period under review. The incidence of *M tuberculosis* infection was 4.9 cases per 100 HIV-infected patients. These patients had very high HIV-RNA levels at baseline and low levels of CD4 T lymphocytes. Of them, 10% had a history of TB and 13% were intravenous drug users. The main form of tuberculosis was the pulmonary one (46%), followed by pulmonary and extrapulmonary forms (27%) and by isolated extrapulmonary forms (27%). The diagnosis of tuberculosis was based on clinical features and therapeutic test in 20.6% of cases, on histopathological findings in 12.7% of cases and on microbiological and biochemical tests in 66.7% of cases. The evolution was favorable in 79.4% of the patients. In 25.4% of cases we had a suspicion of IRS and in 12.7% of patients we had a hypothesis of tuberculosis "unmasked" by antiretroviral treatment. The factors that significantly influenced the unfavorable clinical course in HIV-TB coinfected patients were the type of tuberculosis infection and the presence of associated severe comorbidities.
Conclusion. Factors associated with poor outcome in the HIV-TB coinfected patients are: the type of TB infection and the presence of other diseases.

Assessing the Adherence in Experienced HIV-infected Patients

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Background. Combined antiretroviral therapy represents a cornerstone in HIV infection, transforming it into a chronic, manageable disease. The most important factor that impacts the success of therapy is adherence. We compared different methods to evaluate adherence in HIV-infected patients.
Methods. We applied a questionnaire to patients older than 14 years old followed-up in our clinic. The 9 questions referred to three

different aspects: patients' beliefs regarding therapy, recalling the missed doses and methods used to remember to take the pills.
Every answer was given a certain number of points. The adherent patients scored more than 18 points. We assessed the viral load (VL) and performed genotypic resistance tests for viral loads greater than 5,000 copies/mL.
Results. The questionnaire was filled out by 299 patients out of the 375 patients receiving antiretroviral therapy in our clinic. In 89 (29.7%) patients the questionnaires suggested non-adherence. Among non-adherent patients, only 49 (55%) had detectable viral load. This result can be explained by the fact that some patients (40/299) did not understand some questions, or despite the fact that they don't really understand the importance of the treatment, they actually are not missing doses, suggesting that there are other factors that can influence the adherence, not assessed by our questionnaire. Forty-four out of 210 adherent patients had detectable VL. Twelve adherent patients had VL lower than 1,000 copies/mL and 18 had less than 10,000 copies/mL. In 14 adherent cases (6.6%) the VL was higher than 10,000 copies suggesting the need to use more methods to test adherence in HIV infected patients.
Conclusion. There is no 100% accurate method to measure the adherence in HIV-infected patients on chronic treatment. There also are limits given by great number of factors that impact adherence and their variations over time.

Acute Respiratory Failure in HIV Positive Patients

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Background. Although antiretroviral therapy has decreased the incidence of severe lung disease in patients infected with HIV, acute respiratory failure is still the leading cause of hospitalization of these patients in intensive care services. The primary objective of the study was to determine the etiology and the incidence of respiratory diseases that cause acute respiratory failure in HIV-infected patients requiring oxygen therapy and intensive care monitoring. The secondary objective was to assess the health monitoring needs, the prognosis of patients with acute respiratory failure and causes of death.
Methods. We conducted a retrospective study of cases of acute respiratory failure recorded in the 1043 patients assisted in the HIV Department during January 2011 - June 2012.
Results. Of the 1043 hospitalizations in the HIV Department, 27 (2.58%) patients had acute respiratory failure. Pulmonary tuberculosis (11 patients) and acute pneumonia (9 patients) were the main causes of acute respiratory failure. The remaining cases were 3 patients with tuberculosis associated with measles, 1 patient with tuberculosis associated with pneumocystosis, 2 patients with pneumocystosis and 1 patient with measles-associated pneumonia. Of these 27 patients, 12 died and 9 of them were diagnosed with tuberculosis.
Conclusion. The most common lung diseases that have evolved with acute respiratory failure in patients infected with HIV were tuberculosis and pneumocystosis. The high percentage of deaths of all cases admitted with acute respiratory failure (44.44%) indicates inefficiency of management, prevention and treatment.

Epidemiology of HIV/AIDS in Romania in the European Context

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Background. The evolution of the HIV/AIDS phenomenon in Romania should be considered in the European Union (EU) context, even if the incidence and prevalence place it in Central Europe, with low value of the above-mentioned rates. ECDC's Surveillance Report for 2010 outlined that HIV infection is a major public health issue for Europe, with specific signs of continuous transmission and no clear evidence of significant reduction of cases. The main ways of transmission in EU/EEA are unsafe sexual contact among men who have sex with men (MSM), with a significant share of heterosexual transmission cases from countries with generalized epidemic, and continuous transmission among intravenous drug users (IDU) in Eastern European countries.
Methods. At the end of 2011, we performed the annual surveillance of people living with HIV/AIDS (PLWHA) registered in the National HIV/AIDS Database during the past 25 years, respectively 17,435 cumulative cases. The assessment focused on the incidence and prevalence rates, ways of transmission, survival period, and associated diseases.
Results. Romania continues to have a large number of "long-term survivors", with ages between 20-24 years, 46% of them being women. The main routes of transmission for adults were: unsafe heterosexual contact (60% of new cases); IDU - increase - 3% in 2010 vs. 18% in 2011; MSM - increase - 8% in 2009 vs. 14% in 2011. Newly diagnosed cases entered the 20-24 age group and >35% were "late presenters". The latest concern in our country is the share of new cases - shift to IDUs and MSMs - starting with 2011.
Conclusion. Given this context, HIV/AIDS programs in Romania must be reconfigured, in order to answer to the new trends of transmission as well as to the economic crisis the world is facing.

Pregnancy and Birth in HIV Seropositive Women

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Background. Since 1992, the Clinical Hospital of Obstetrics and Gynecology "Prof. Dr. Panait Sîrbu" has recorded and monitored pregnancies, births and miscarriages associated with transmittable diseases (including HIV) from Bucharest, Ilfov and the surrounding counties. In time, within the "Prof. Dr. Panait Sîrbu" Clinic, we have systematized and implemented an obstetric protocol for the prevention of HIV vertical transmission.
Methods. The aim of this protocol has been to reduce the HIV vertical transmission rate from 30-35%, the value in 2000, to 2-3%, the rate recorded in developed European countries.
Starting from the main objective to decrease mother-to-child vertical transmission, we established the cesarean section as the method of delivery for all HIV positive women, at 38 weeks, on intact membranes, outside labor. The result was a significant decrease in the number of HIV positive babies.
Results. The results of the past seven years have been most encouraging, with a 0 rate of vertical transmission through cesarean section (76 cases), and a 23.63% transmission for vaginal delivery (55 cases).
Conclusion. Attentive monitoring of pregnancy by the obstetrician in cooperation with the infectious diseases specialist, delivery by cesarean section, antiretroviral therapy for both mother and child and ablactation have been the main means through which a spectacular decrease in HIV vertical transmission has been achieved.

Poster presentations

Evolution of *C neoformans* Infection in HIV Patients with Alternative Etiological Treatment

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Background. Cryptococcosis remains one of the most important opportunistic infections associated with HIV infection even in the era of highly active antiretroviral therapy. It has a high mortality rate (35-65%).
Our objectives were to determine the evolution of *C neoformans* infection while the first choice etiological treatment is not available, the main therapeutic option being fluconazole.
Methods. Retrospective analysis of clinical development in *C neoforman*s infection in seropositive patients recorded at the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest, Romania between January 2000 and June 2012.
Results. There were 56 episodes of cryptococcosis in 41 seropositive patients. The main clinical manifestations were headache (85.7%), fever (82.1%) and change of consciousness (44.6%). Patients had a high degree of immunosuppression at baseline (mean CD4: 62.8 cells/cmm). Cerebrospinal fluid (CSF) changes were modest (average number of nucleated elements in the CSF: 39.4 cells/cmm, with mean protein values: 113.5 mg/dL). In 83.9% of patients China ink examination of the CSF sediment was positive and cultures from CSF were positive only in 42.9% of cases. 75% of the tested strains proved to be susceptible to fluconazole. In 8.3% of cases susceptibility to fluconazole was dose-dependent. 16.7% of the strains were resistant to fluconazole. Fluconazole was used in 97.6% of episodes. In 27 cases (65.9%) the evolution was to aggravation of symptoms or death. In 13 (31.7%) patients there was a high suspicion of IRS and 69.2% of them had a favorable outcome.
Conclusion. With fluconazole therapy 65.9% of our patients had a poor outcome. Although rare in our patients, *C neoformans* infection had a severe evolution, similar to the situation in African countries. A suitable therapeutic approach is required for a better prognosis.

Use of Noninvasive Serum Markers for Nonalcoholic Steatohepatitis and Transient Elastography to Assess the Effect of Long-term Antiretroviral Therapy on Liver in HIV Mono- and HCV Co-infection

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Background. Efficient antiretroviral therapy (ART) has been shown to slow fibrosis progression in HIV-HCV (hepatitis C virus) coinfected patients. On the other hand exposure to certain antiretroviral agents is known to cause a different type of hepatic injury, including steatohepatitis, and it may represent a risk factor for liver fibrosis.
We aimed to assess the effect of ART on liver nonalcoholic steatohepatitis (NASH) and fibrosis, using FibroMax and FibroScan as noninvasive methods.
Methods. We assessed 150 consecutive HIV-infected individuals (92 men, mean age 42±7.4 years) through FibroMax, HOMA score and transient elastography. There were 82 HIV mono-infected, 45 HIV-HCV coinfected patients receiving ART. Twenty-six HIV mono-infected patients without ART served as control. Current and past ART were recorded. Significant fibrosis were considered >0.5 on FibroTest, >7.65 kPa for transient elastography, corresponding to METAVIR score F≥2) and 0.75, respectively 13.01 kPa, if cirrhosis was considered. NASH was considered probable if the score was >0.5.
Results. NASH was present in 38%, 48%, and 23% of patients for HIV mono-infected plus ART, HIV-HCV coinfected plus ART, respectively HIV mono-infected without ART. Significant fibrosis and cirrhosis was present in 4.2% and 0.7% of HIV mono-infected patients, 65% and 17% of HIV-HCV coinfected patients and in approximately 25% of HIV mono-infected patients without ART. In a linear regression model, factors independently associated with increased FibroTest values were only HCV infection ($p<0.0001$) and the cumulative dose of any ART ($p=0.28$). For NASH, ART cumulative dose and HOMA score were independent indicators, with $p=0.03$ and $p=0.34$.
Conclusion. Use of noninvasive markers for steatohepatitis and fibrosis show that ART is an independent risk factor for NASH and significant fibrosis.
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Dark "Cover" of a "Dark" Disease: Differentials of Melanodermia in an HIV Positive Patient

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The objective is to emphasize a particular cause of melanodermia in an HIV positive patient, as a side-effect of medication.
Case report. We report a case of sudden generalized skin darkening during treatment of an opportunistic infection. A 38 year-old HIV positive Caucasian male, with a history of pulmonary tuberculosis, was admitted for meningoencephalitis, with a CD4 of 13 cells/cmm and a viral load of 5 log. Clinical examination showed hypotrophy, Fitzpatrick IV skin type, normal temperature, nuchal rigidity. The CSF culture and India ink were positive for *C neoformans* (MIC=8 for fluconazole). He received fluconazole 800 mg/day and after two weeks antiretrovirals (3TC/ABC+darunavir/r). After the third week, the CSF fungal culture was still positive (the same susceptibility). We increased the fluconazole dose to 1200 mg/day and added 5-flucytosine (5-FC) orally 100 mg/kg/day. After nine days of this combined therapy, he complained of darkened skin, which was confirmed by the medical personnel (Fitzpatrick V). His scars turned black.
We analyzed the following possible causes: Addison's disease, intracranial tumors, hemochromatosis and drug-related reactions. Ruling out the other diagnoses, we then considered a drug-induced adverse effect.
Melanodermia is not mentioned as an adverse reaction of 5-FC. 5-FC exerts its effect via 5-fluorouracil (5-FU), further converted to metabolites that inhibit fungal RNA and DNA synthesis. The conversion 5-FC into 5-FU also takes place in the human gut when 5-FC is taken orally. 5-FU can cause darkening of the skin in 10-30% of cases.
Conclusion. Melanodermia could be a consequence of 5-FC therapy.

Multidrug Resistant Tuberculosis in HIV Infected Patients

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Background. Tuberculosis (TB) is a global public health problem. The HIV-TB coinfection, the presence of multidrug resistant strains (MDR) makes the treatment and control of TB difficult. Objective: presentation of TB diagnosed in patients monitored at the Mureş Regional anti HIV/AIDS Centre (CRLASM).
Method. Retrospective cross-sectional study of 47 HIV seropositive patients (23 female, 16 from the urban environment, average age: 28 years), diagnosed with TB during 2009-2011. We have studied: epidemiological, clinical data, the diagnostic method, sensitivity of the Koch bacillus, evolution of the disease.
Results. Twenty-eight patients belong to the historical group, 5 have been recently diagnosed because of TB, 6 have been diagnosed with HIV-TB in the past, 34 of those diagnosed in the past were not adherent to the antiretroviral therapy, 19 have developed extrapulmonary TB. The TB diagnosis was based on direct bacilloscopy from pathological products: 33 positive, of these, 5 cultures were negative. The results from the Löwenstein-Jensen cultures and antibiotic sensitivity tests were available in an average of 60 days. From the 42 positive cultures, 27 were MDR, of which 8 XDR, 12 pre-XDR (quinolone resistant). In 2009 the first MDR/XDR strain was isolated, in 2010 - 7 strains, in 2011 - 19. Twenty-six deaths were registered.
Conclusion. 80% of those with TB were not adherent to antiretroviral therapy, 64% of the isolated cultures were MDR/XDR, the late diagnosis and treatment contributing to the large number of deaths. Because of the absence of modern, fast methods of diagnosis, human and financial effort in assisting HIV-TB patients is wasted.

Efficacy and Safety of First-Line Antiretroviral Therapy in Patients Coinfected with HIV and HCV

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Background. In recent years remarkable progress has been achieved in the monitoring and treatment of hepatitis C virus (HCV) infection in HIV positive patients. Due to high costs, highly active antiretroviral therapy often remains the only solution for these patients.
Methods. Retrospective analysis and antiretroviral therapy efficacy comparison between HIV mono-infected patients versus patients confirmed with HIV-HCV coinfection at the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" from January 2010 to June 2012.
Results. There were 56 confirmed patients with HIV-HCV coinfection and 324 mono-infected HIV individuals. There was a 14-fold increase in the number of coinfections in 2012 vs. 2010. Patients HIV-HCV coinfected have a lower degree of immunosuppression, with a mean CD4 cell count at baseline of 355 cells/cmm (vs. 171 cells/cmm in mono-infected patients). Access to monitoring for HCV infection remains limited. The use of nonspecific tests indicates a risk of F2-F4 fibrosis in 13% (APRI score) and 50% (Forns score) in coinfected patients and a risk of cirrhosis in 10.9% and 14.7% of coinfected patients. Only 50% of the coinfected patients received antiretroviral therapy (ART). The mean time needed to record an average increase of 100 cells/cmm in CD4 T lymphocyte number is 173 days for mono-infection and 207 days for coinfection. The risk of death is higher in coinfection (10.7% vs. 5.7%). None of the HIV-HCV coinfected patients was treated for HCV.
Conclusion. In the past two years we have had a significant increase in the number of HIV-HCV coinfected patients. Access to monitoring and ART is limited. In these patients, the effectiveness of ART is lower and the risk of adverse reactions and deaths is higher.

Cardiac Abnormalities in HIV Patients

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Background. The association between HIV and cardiac abnormalities has not been sufficiently studied to determine the exact risk factors involved in cardiovascular pathology in HIV positive patients.
Methods. We performed a prospective study to determine the prevalence of cardiac manifestations in HIV patients, particularly in HIV infected patients with F clade from the Romanian cohort of children infected at birth. We analyzed the classical cardiovascular risk factors, we checked for coinfections, adherence to antiretroviral therapy (ART) and we assessed cardiac abnormalities through echocardiography.
Results. Out of the 40 patients included in the study, 25 patients (62%) presented without cardiac abnormality, while 15 (38%) presented cardiac abnormalities. The main risk factor to develop cardiac abnormalities was male gender (9 cases, 60%). The relative risk (RR) for gender was 2.029 and the odds ratio (OR) was 3.187.
The second risk factor was smoking. In smokers the ratio of cardiac vs. no cardiac abnormalities was even higher: out of the 15 patients with cardiac abnormalities, 11 (73%) were smokers. The RR of smokers was 1.833 and the OR was 2.538.
Conclusion. In this study the prevalence of cardiac abnormalities in HIV positive patients is almost 40%, vs. 8-10% in other developed European countries with the same access to highly active antiretroviral therapy (p value <0.0001). The reason for the high prevalence of cardiac abnormalities could be the risk factor of smoking and the endothelial damage that smoking causes to the heart muscle.

Maternal HIV-TB Coinfection – Case Report

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Background. HIV infection in young women raises the problem of mother to child transmission. Despite the existence of efficient prophylactic measures, these do not apply in some cases, due to social and cultural problems.
Case report. We present the case of an HIV positive woman diagnosed with miliary tuberculosis, and her 19 months old child, also HIV positive.
The 20 years old patient was diagnosed with HIV in 2009. She was counseled regarding her disease and prevention of mother-to-child transmission. However she did not return to the hospital for a period of 3 years, during which she gave birth to a child. In 2012 she was brought back to our care by a social worker.

Miliary tuberculosis was diagnosed by chest radiograph, sputum smear and culture. The abdominal ultrasound revealed left hydronephrosis, *Mycobacterium tuberculosis* was cultured from urine. The TCD4+ cell count was 159/cmm. Antituberculous and antiretroviral therapy was initiated. The child had failure to thrive, skin scars, HIV infection was confirmed by serological tests and HIV viral load. *Mycobacterium tuberculosis* was not found in gastric fluid or fecal samples. Antiretroviral therapy was initiated. Prognosis is poor in both cases, due to the presence of the maternal opportunistic infection, the HIV positive status of the child and especially due to unfavorable social conditions.
Conclusion. We underline the role of social conditions in the mother-to-child transmission of HIV, and the importance of social services in the management of HIV positive female patients.

Risk Factors for Pneumococcal Infections in HIV Positive Patients

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Background. The risk of pneumococcal infection in HIV positive patients is correlated with progressively increased immunosuppression. We aimed to identify risk factors for pneumococcal infections in HIV-infected patients (HIP).
Methods. A retrospective study compared the period 01.01.2006-31.12.2010 on two groups of HIP with antiretroviral (ARV) treatment: group A - 21 HIP with pneumococcal infections diagnosed in 2010 and group B - 43 HIP without acute infections; parameters were analyzed retrospectively in 2010 (T1), 2008 (T2) and 2006 (T3).
Results. Demographics: group A – 7M/14F; 12R/9U, mean age 20.83±6.32 years and group B – 22M/21F, 18R/25U, mean age 20.48±7.33 years. Mean CD4 count (cells/cmm) in group A vs. group B was: at T3 – 553.09±182.54 vs, 658.09±332.2 (p=0.12), at T2 – 437.09±113.89 vs. 377.16±634.3 (p=0.039) and T1 – 163.82±53.21 vs. 682.5±388.22 (p=0.0001). The mean HIV viral load (copies/mL) in group A vs. group B was: at T3 – 2,413.23±623 vs. 2,123.2±623.83 (p=0.06), at T2 – 1,011.78±314.56 vs. 954.71±224.33 (p=0.399) and at T1 – 8,563.997±2,167.52 vs. 78.43±29.21 (p=0.0001). AIDS-related clinical events were found in group A in 3 HIP (14.29%): at T1 – 1 case of herpes zoster and at T2 – 1 case of tuberculosis and 1 case of herpes zoster; in group B at T2 – 2 cases (4.65%) of herpes zoster, p>0.05.
Conclusion. The risk factors for pneumococcal infections in HIP were: decreasing trend for CD4 cell count and respectively increasing trend for HIV viral load, within the 3 years before detection of these infections.

Malaria-induced Immunosuppression – Trigger for a Chain of Opportunistic Infections that Lead to the Diagnosis of HIV Infection

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Background. Cellular immunosuppression caused by HIV produces a disruption of the immune system which may be associated with failure in malaria prevention or in the clinical course of this disease. In turn, malaria induces worsening of immunosuppression, a decrease of the immune status that can precipitate an opportunistic infection in a late-presenter.
Case report. We present the case of a 37 year-old patient, sailor, returned from Africa within the 7 days prior to admission, hospitalized in our clinic. He was admitted for febrile coma with suspicion of acute meningoencephalitis. Having returned from an endemic area for malaria, the diagnostic tests for malaria and complete cerebrospinal fluid (CSF) examination were performed. He was diagnosed with *Cryptococcus neoformans* meningoencephalitis and malaria with *Plasmodium falciparum*. The cryptococcal infection raised the suspicion of an HIV infection. The patient was counseled and tested for. He was diagnosed with AIDS stage C3 (CD4 count 7cells/cmm, HIV-RNA 229,000 copies/mL). Quinine therapy was started at 1800 mg/day for 7 days (negative repeated smear for malaria), fluconazole 400 mg/day for 3 months, depletives, corticosteroids, symptomatic treatment, with slow recovery. He started highly active antiretroviral therapy, but he developed secondary caseous ulcerated pulmonary tuberculosis and died.
Conclusion. The particularity of this case is that severe malaria produced a rapid decrease of the immune status, which led to HIV diagnosis.

HBV Influence on Response to Antiretroviral Therapy in Horizontally HIV-HBV Coinfected Patients during Infancy

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Background. There are few studies on pediatric HIV-HBV (hepatitis B virus) coinfection, so evidences about relationships between the two viruses are scarce. We evaluated the influence of HBV infection on the virological and immunological response to antiretroviral therapy (ART) in antiretroviral-naïve HIV-HBV horizontally coinfected subjects during infancy.
Methods. Observational study on 826 HIV positive subjects in the evidence of the Craiova Regional Centre; we analyzed the immunological and virological response at 6-12 months after starting the first antiretroviral regimens, comparatively in two groups: horizontally HIV-HBV coinfected subjects during infancy (SCo) versus horizontally HIV infected subjects during infancy without HBV infection (non-SCo).
Results. The number of subjects: SCo-66 subjects, non-SCo-132 subjects. Demographic data: SCo-gender ratio F:M=0.886, the majority lived in rural area (57.58%), the mean age at diagnosis-9.288±4.607 years vs. non-SCo-gender ratio F:M=0.859, the majority lived in urban area (53.79%), the mean age at diagnosis-10.742±5.107 years. At baseline, the HIV category was: SCo-A-1.52%, B-80.30%, C-18.18% vs. non-SCo-A-2.27%, B-70.45%, C-27.27% (χ^2 p=0.332), the mean CD4 cell count was: SCo-148.33±148.10 cells/mL, non-SCo-163.17±155.39 cells/mL (Student test p=0.521) and the mean HIV viral load (HIV VL) was: SCo-5.06±0.80 log copies/mL (for 29 subjects), non-SCo-5.04±0.84 log copies/mL (for 61 subjects) (Student test p=0.978). The median date of starting ART: SCo-26.03.2001, non-SCo-16.08.2001 (Mann-Whitney p=0.053). AIDS-related clinical events during the study period: SCo-3.03%, non-SCo-6.82% (χ^2 p=0.282). At the end of the study period, the mean increase in CD4 cell count was: SCo-177.068±141.676 cells/mL, non-SCo-176.015±191.751 cells/mL (Student test p=0.969) and the mean decrease in HIV VL was: SCo-5.064±0.802 log copies/mL, non-SCO-5.043±0.836 log copies/mL (Student p=0.911).

Conclusion. The presence of HBV coinfection does not significantly influence immunological or virological response to ART.

Movement Disorders – an Unusual Presentation of Progressive Multifocal Leukoencephalopathy

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Background. Movement disorders are not uncommon in HIV infection, being the result of opportunistic infections, HIV encephalopathy or side effects of drugs. The most frequent dyskinesia reported in HIV positive patients are chorea and tremor. However, other hyperkinesias such as myoclonus can be seen.
Progressive multifocal leukoencephalopathy (PML) is an opportunistic infection caused by the JC virus, characterized by focal demyelination, the clinical manifestations varying with lesion location.

Case report. We report the case of a 23 year-old female patient diagnosed with HIV infection 3 years back, in treatment with highly active antiretroviral therapy, with right upper limb myoclonus that had started about one month back and had gradually worsened.
The neurologic examination revealed right upper limb stimulus-sensitive myoclonus more pronounced in action and when maintaining a posture, and brisk tendon reflexes in this limb. Laboratory testing revealed a CD4 count of 95 cells/µL, a viral load of 225,479 copies/mL. Lumbar puncture tests were negative for herpesviruses, adenoviruses, parvoviruses and enteroviruses, but positive for JC virus. The brain magnetic resonance imaging (MRI) scan revealed multiple millimetric lesions, situated in the right middle peduncle, right mesencephalon, left lentiform nucleus and subcortical lesions in the left temporal, frontal and occipital lobes.
Conclusion. The present case reports a very rare clinical presentation of PML; the multiple lesions found in our patient make it difficult to attribute the myoclonus to a specific lesion. Although the presence of myoclonus would have made HIV encephalitis more probable, the radiologic imaging and the presence of JC virus in the CSF were highly suggestive for PML.
Contributions. The first 2 authors contributed equally to the present work.

SESSION 6. Bacterial infections in IVDU & State-of-the-art in intensive care

Oral presentations

Clinical Aspects, Management and Prognosis of Right-sided Infective Endocarditis in Intravenous Drug Users

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Background. In the last two years we registered an alarming increase of intravenous drug users (IVDU) addressing to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", right-sided infective endocarditis (RSIE) being a frequent pathology among drug addicts.
The objective of this study was to identify the etiologic, clinical and evolution particularities of IVDU patients admitted to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" from January 2011 to August 2012, with RSIE as diagnosis.
Methods. We analyzed the etiology, clinical manifestations, therapy and evolution of the IVDU users with RSIE in a retrospective study from January 2011 to August 2012.
Results. The study included 33 patients with RSIE, 64% of them (21/33) with *Staphylococcus aureus* as pathogen (27% MRSA, 31% MSSA, 6% *Staphylococcus aureus* unspecified as methicillin-resistant or methicillin-sensitive). There were no statistically significant differences regarding MRSA versus MSSA.
Twelve patients (57%) from the twenty-one with *Staphylococcus aureus* as pathogen, were HIV positive.
The outcome with the prescribed antimicrobial therapy was poor for six patients, five of them died, three with *Staphylococcus aureus* as pathogen (2 MSSA/1 MRSA).
Conclusion. The primary pathogen of right-sided infective endocarditis in IVDU is *Staphylococcus aureus*, but it is not associated with increased mortality rates.

The Role of Ethnobotanical Drugs on the Recent Outbreak of Right-sided Endocarditis in Romania

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Background. Romania is facing a recent outbreak of infective endocarditis (IE) in injecting drug users (IDUs). This started in 2010, after the introduction of the ethnobotanical drugs. This study explores the features of this outbreak.
Methods. Retrospective study of IDU patients with IE hospitalized in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" between 2007 and September 2012.
Results. We identified 45 patients, out of which 30 were men (M/F=2), with a median age of 29 years. Thirty-seven (82%) used heroin (with a median duration of 10 years), 32 (71%) consumed ethnobotanical drugs (with a median duration of 1 year) and 24 (53%) used both drugs. Twelve cases of IE in IDUs were diagnosed in the first 9 months of 2012, 21 in 2011, 10 in 2010 and only 2 cases between 2007 and 2010. Tricuspid valve endocarditis (TVE) was diagnosed in 37 (83%) cases; the most common pathogen isolated in 31 (70%) blood cultures was *Staphylococcus aureus* (18 MRSA). Multiple embolic lung abscesses were reported in 30 (81%) cases. A favorable outcome was seen in 18 (40%) patients, 15 (33%) fled from the hospital, 8 (18%) died and only 4 (9%) were transferred to a cardiovascular surgery ward. Twenty-two (49%) were diagnosed with HIV infection (11/22 in 2012). Most of them were staged A, median CD4 count was 353 cells/cmm. Coinfections: HCV was diagnosed in 44 patients (98%) and HBV in 7 (16%).
Conclusion. Although many IDUs were heroin users, very few cases of TVE were reported before 2009, suggesting that the recent outbreak of TVE in IDUs is related to the use of ethnobotanic drugs. Although tricuspid valve surgery procedures are available and could reduce the mortality in cases with severe tricuspid regurgitation, only a small number of patients have access to surgical treatment. In most cases, HIV infection was acquired recently, related to ethnobotanical drug use.

Optimization of the Intensive Care Unit Management

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Background. The presentation of data regarding the complexity of the severe infections in patients with major risk factors, co-morbidities and/or immunosuppression of varying etiology, leading to severe sepsis, commands a permanent preoccupation towards developing the human and material resources in order for the quality of the medical care to correspond to the present day standards. The rising number of patients directed to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" and to its Adult Intensive Care Unit, are proof of the quality of the medical care provided during the last 7 years.
Methods. Three year retrospective study of patients admitted to the Adult ICU of INBI, with the previously mentioned risk factors.
Results. A statistical analysis of the data for the last 3 years showed a slight increase of the number of patients, but a significant increase of comorbidities (from 10.64% in 2010 to 16.62% in 2012). Major risk factors, like diabetes, cirrhosis, HIV immunosuppression and/or malignancies, as well as illegal drug use and obesity, are on the rise. Also, we observed a significant increase of severe cases, reflected by a higher percentage of patients with organ failures (respiratory insufficiency, from 9.67% in 2010 to 16.2% in 2012; renal insufficiency, from 4.51% to 9.59%; neurologic impairment, from 6.7% la 10.4%).
This led to the development of severe complications, increasing the material and human costs of the medical provider, sometimes with therapeutic failure.
Conclusion. Maintaining and continuously surpassing the medical standards of care in the patients benefit involves technical means of the latest generation in the fields of diagnosis (e.g., PLEX-ID), medical treatment (last generation of antibiotics and antifungal therapy) and advanced life support, through extracorporeal hepatic and renal epuration - molecular adsorbent recirculating system (MARS).

Guidelines and Objectives for Volemic Resuscitation in Septic Shock

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Sepsis is the systemic inflammatory response syndrome secondary to a local infection, and severe sepsis and septic shock are the more devastating scenarios of this disease. In the last years new knowledge has been acquired, many new treatments were introduced but sepsis is still one of the leading causes of death in intensive care units (ICUs).
The early stages of sepsis are characterized by a variety of hemodynamic derangements that induce a systemic imbalance between tissue oxygen supply and demand, leading to global tissue hypoxia. The early identification of high-risk patients through tissue perfusion markers (such as lactate and venous oxygen saturation) is crucial for prompt initiation of early-goal-directed-therapy as necessary.
Implementation of the Surviving Sepsis Campaign has been associated with improved outcome in patients with severe sepsis. Resolution of lactate elevations or lactate clearance has also been shown to be associated with improved outcome. Unfortunately, most of the recommendations of these guidelines are not evidence-based and their clinical signification is under increasing scrutiny.
The purpose of this presentation is to review the most commonly used hemodynamic and perfusion parameters for hemodynamic optimization in sepsis, their effectiveness as goals of volemic resuscitation, and to look for other goals of treatment which can improve the outcome of septic patients.

Dysnatremia in Patients with Heat Stroke

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Background. Heat stroke (HS) is an underdiagnosed clinical entity with a rising incidence in Romania in recent years. Due to its main symptom, increased body temperature, patients get the services of infectious diseases. Among the organ insufficiency that occurs rapidly in this syndrome, electrolyte disorders and, in particular sodium imbalance, occupies one of the first places.
We aimed to highlight the frequency and severity of dysnatremia in HS patients admitted to the intensive care unit (ICU), and standardize its management.
Methods. We performed a retrospective study on patients admitted to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" with HS between 2010-2012, which required admission to the intensive care unit, patients with multiple organ dysfunction. We followed the frequency of dysnatremia and its impact on the evolution and prognosis of patients.
Results. The study revealed 83 patients with HS, of which 47 (56.6%) had dysnatremia. Thirty-two (38.5%) had hyponatremia, and 15 (18%) hypernatremia. Mortality was 83.1% for the whole group, and in those with dysnatremia, 87.6%.
Conclusion. Dysnatremia is a condition frequently associated with HS. Severity and timeliness of correction are decisive factors affecting prognosis of patients.

Poster presentations

Infectious Pathology in Drug Consumers

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Background. We analyzed the risk of infection in the population of intravenous drug users (IVDU).
Methods. Retrospective study on 118 patients admitted to the Clinical Hospital of Infectious and Tropical Diseases "Dr. Victor Babeş", Bucharest, between January 2011 and December 2011, which highlighted the high risk of IV drug use in developing certain infectious diseases, complications, features.
Results. The study included 118 patients, of which 82% were men and 18% were women aged between 13 and 60 years, mostly from urban areas (88%).
Of the study group 82 patients are heroin users, the rest being consumers of ethnobotanical drugs or of combinations with other

drugs. Reporting to the degree of training highlights the lack of studies in 11% of cases or minimal education (86%). Pathology revealed skin and soft tissue infections (23.6%) lung infections (pneumonia, bronchopneumonia, tuberculosis) - 35.59%, endocarditis - 11.86%, septicemia - 5%, CNS infections (meningitis) - 3.38%, viral hepatitis (HBV, HCV, HDV or coinfections) - 72.8%. Pathogens most commonly involved in the etiology of the described diseases were: *Staphylococcus aureus* - 86% of cases (of which 25% MRSA), beta-hemolytic *Streptococcus*, *Acinetobacter*, isolated from blood cultures or other samples.

Conclusion. The numbers of IVDU have increased, associating a decreasing age of drug use; treatment is difficult due to low patient compliance; the features and clinical manifestations of infectious diseases were variable, through associations with an immune suppressed field.

SESSION 7. Viral hepatitis: new concepts and new treatment options

Oral presentations

Use of Quantitative Serum HBsAg for Optimization of Therapy in Chronic Hepatitis B Patients Treated with Peginterferon alfa-2a: Prediction and Response Guided Therapy

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Background. The aim of the study was to asses quantitative HBsAg (qHBsAg) as a surrogate marker for the prediction of sustained virological response (SVR) and in particular the lack of response in chronic hepatitis B (CHB) patients treated with pegylated interferon alfa-2a (Peg-IFN α-2a).
Methods. We performed a prospective cohort study initiated in September 2009. HBsAg was quantified using the Architect 2000 HBsAg assay (Abbott Laboratories). SVR was defined as HBV-DNA below 2,000 IU/mL at 24 weeks after stopping therapy. The study enrolled 57 patients with CHB treated with Peg-IFN for 48 weeks with another 24 weeks for follow-up.
Results. Mean age of patients was 34 years, the male/female ratio was 4.2/1 and the patients of the most had HBeAg-negative CHB (68%, n=39). The mean values of the main parameters were 13,038 IU/mL (4.1 log IU/mL) for qHBsAg, 78 U/mL for ALT and 4.95 log UI/mL for HBV-DNA. Positive predictive factors at baseline for SVR were low levels of qHBsAg (3.72 log IU/mL, p=0.032) and HBV-DNA (3.96 log UI/mL, p=0.035). Overall, HBsAg levels decreased significantly through 48 weeks of therapy (the mean decline was 0.48 log IU/mL, p=0.003). HBV-DNA reduction of more than 2 log IU/mL with any decrease of HBsAg level after 12 weeks of therapy had a positive predictive value (PPV) of 80% (95% CI: 51.91-95.43%) for SVR, while reducing HBV-DNA with less than 2 log UI/mL without any decline of HBsAg level had a negative predictive value (NPV) of 85.71% (95% CI: 42.23-97.63%) for SVR.
Conclusion. Depending on the response, qHBsAg managed to identify early, with high probability, the patients who are likely to respond and or to not respond to treatment with Peg-IFN α-2a, proving its usefulness in optimization of therapy according to response.

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Pegylated Interferon and Ribavirin Therapy – The Importance of Non-hematologic Side Effects Monitoring

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Background. The number of patients with hepatitis C virus (HCV) infection treated with interferon and ribavirin is also increasing in Romania. Following this increase we are facing a range of significant adverse effects of the antiviral therapy: some more common, which are routinely monitored, others rare, sometimes difficult to attribute to the drug.
The study has the following objectives: 1. Monitoring the adverse effects of interferon and ribavirin treatment, focusing on the non-hematological ones, rarely reported in the literature. 2. Presenting a review of non-hematological adverse effects arising under interferon and ribavirin treatment.
Methods. We performed a prospective, observational study monitoring the adverse effects correlated with interferon treatment.
Results. We enrolled 179 patients. We report 28 cases of retinopathy, 27 cases of thyroid dysfunction, one case of de novo diabetes mellitus, two case of thrombophlebitis, one case of acute pericarditis, one case of Wegener granulomatosis, one case of severe cardiac insufficiency, one case of sarcoidosis, one case of pneumocystosis. The correlation between the adverse effects and interferon administration was made using the Naranjo adverse drug reaction probability scale. Their gravity was appreciated with the Common Terminology Criteria for Adverse Events (CTCAE). In the international literature there have been reported cases of: ulceronecrotic enterocolitis, toxic pneumonitis, de novo diabetes mellitus, Harada disease, sarcoidosis, toxic cardiomyopathy, etc.

Conclusion. It is important to monitor and report cases of rare adverse effects related to interferon administration.
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Ultrasound Evaluation in Patients with Chronic Hepatitis

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Background. Liver diseases recorded a prevalence of 2.2 billion cases worldwide (500 million cases in chronic stage), chronic hepatitis being the 10th most common cause of death with over 1 million deaths annually; in this frame, the dynamic evaluation of the disease is very important in order to establish an appropriate therapeutic management.
The objective of the paper: noninvasive ultrasound evaluation of patients with chronic liver disease by determining and following specific morphological and functional parameters.
Method. We conducted a retrospective study between 2008-2011 on 4,115 patients diagnosed with chronic liver disease (viral and toxic-nutritional). The equipment used was an Aloka Prosound 4000 with multi-frequency transducer (2.5/3.8/5/6 MHz).
Results. The patients were scanned in both supine and left lateral decubitus position, with subcostal and intercostal approach. All exams were performed under fasting conditions, and time - gain compensation was set to adjust the tissue echogenicity as constant as possible. We registered the morphologic parameters (size of the left liver lobe, right liver lobe, caudate lobe, portal vein, hepatic artery, hepatic veins) and the functional parameters (flow velocity in the portal vein and hepatic artery, portal vein and hepatic veins flow pattern and direction). The results were compared with the data obtained from a control group of 82 healthy patients. The patients with chronic hepatitis showed increased liver size (mainly of the left and caudate liver lobe), enlarged portal vein, reduced size of the hepatic veins, decreased flow velocity in the portal vein and increased flow velocity in the hepatic artery.

Active Diagnosis of Chronic Hepatitis C – Cost/Effectiveness Ratio

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Romanian Society of Infectious Diseases

Background. Chronic hepatitis C is a major public health problem. For Romania, it is important to note the actual dimensions of the disease along with the detection capability and the affordability of treatment costs.
We analyzed the following features related to active diagnosis: percent of new cases; recruitment for treatment; assessment of cost/efficiency.
Methods. We tested for hepatitis C virus by ELISA a total of 680 subjects and 137 patients with rapid test.
Results. By ELISA a total of 31 subjects were new cases (4.5%). Of the 12 positive patients we recruited for treatment (1.9%). The cost was about 3,000 EUR/patient recruited for antiviral treatment.
The rapid test was positive in 5 cases and ELISA confirmed in 4 cases (80% confirmed) of which 2.9% were new cases, one case was recruited for treatment, that is 0.7%. The cost per recruited patient was 700 RON).
Conclusion. Detection of chronic active hepatitis C recruits for proper treatment <2% of the test subjects. The question is whether the method would be cost/effective and applicable. Less rapid test (false negative in 20% of cases).
By the ELISA method we found 4.5% of new cases of hepatitis C, and 2.9% by rapid test. Recruitment of patients for treatment was <2%. The cost/efficiency ratio is in favor of the rapid test, but the risk of false negative is 1/5 cases.

Particularities of HBV-HIV Co-infection in the Youth from Galaţi

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Background. Globally, over 10% of people with HIV/AIDS are chronically infected with hepatitis B virus (HBV). The predominance of nosocomially HIV-infected patients (1988-1990) during their early childhood with frequent HBV coinfection is the main particularity of the Romanian HIV/AIDS epidemic.
Methods. The prospective study (2005-2012) assesses 179 patients from Galaţi, born during 1988-1990, nosocomially-infected, with HIV diagnosed before the age of 16. We analyzed demographic data, HBsAg, the clinical and immunological stage, the nadir CD4 cell count, antiretroviral therapy (ART), ALAT levels, CD4 cell count and HIV viral load endpoints.
Results. The characteristics of the patients were: sex ratio M/F: 99/80; AIDS 88%; median nadir CD4 count 126/cmm [4; 866]. Positive HBsAg was found in 44.6% patients. Among them, 18.75% developed HBs seroconversion and 2.5% had persistent HBsAg during the study. The prevalence of chronic HBV infection was 36%. 97.7% patients experienced an average of three [1;9] ART combinations, including lamivudine (LAM), supplied for over 5 years to 76% of patients. Tenofovir/emtricitabine have been available since 2010 and were supplied to 16.75% patients. We recorded 54.75% patients with high ALAT levels, but 28% had over three times the normal value. Out of the patients under ART, 42.2% had persistent undetectable HIV viral loads and 47.5% had a CD4 count over 500/cmm. High ALAT levels were related to male sex (p=0.032; OR=1.91), alcohol intake, (p=0.035; OR=1.96), tuberculosis treatment (p=0.039; OR=2.11), detectable HIV-viral-load after ART (p=0.001; OR=2.96) and >5 years of LAM treatment (p=0.002; OR=3.13). Liver enzymes were significantly correlated with HBsAg (p<0.001; OR=7.66), immunological restoration CD4 count over 500/cmm (p<0.001; OR=6.15) and the death risk (p<0.001; OR=20.02). The mortality was 11.5% (20/173), but it was not correlated with HBsAg (p=0.721; OR=1.18).
Conclusion. The prevalence of persistent HBV in youth from the HIV pediatric cohort in Galaţi is 36%. The risk for liver cytolysis is correlated with HBsAg and immunological restoration but should be influenced by the male sex, drug/alcohol liver toxicity, long-term LAM experience and HIV replication. Mortality is not influenced by HBV coinfection.

Peginterferon Induced Severe Neutropenia and Treatment with Filgrastim in Patients with Chronic B or C Hepatitis – Case Reports

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Background. Treatment of chronic viral hepatitis is an increasingly higher challenge, due to the desire to obtain sustainable success rates and corrections caused by frequent adverse effects. It is known that

one of the most common side effects of treatment with peginterferon/ribavirin is neutropenia, often severe, which, uncorrected, requires discontinuation of therapy. Association of granulocyte stimulating factor is imperative for antiviral treatment to be continued.

Case report. We present two patients with chronic hepatitis B and two with chronic hepatitis C treated with peginterferon ± ribavirin, who developed severe neutropenia in about two to three months after starting therapy, requiring filgrastim associated with dose reduction of peginterferon.

Results. All four cases included severe neutropenia (≤500/cmm), mainly through rates under 30% of the total number of leukocytes. filgrastim was administered one day before peginterferon, initially at a dose of 30,000 IU, associated with 135 μg peginterferon, without significant correction of neutropenia in the first week.

Due to this, after three weeks we decided that in two cases (when hepatic cytolysis values remained higher than three times the normal value) we would maintain the peginterferon dose, increasing filgrastim to 48,000 IU, in the other two cases maintaining the filgrastim dose and associating a decrease in the peginterferon dose to 90 μg/week. According to these facts neutropenia was partially corrected, with increasing numbers of neutrophils (on average 900-1,000/cmm), tracked weekly the day before administration of peginterferon. This could allow us to stop the weekly administration of filgrastim, requiring only bimonthly correction for about 2-3 months, in three cases stopping its administration after this period. All four cases achieved sustained virologic response (SVR) with undetectable viremia at 16 or 48 weeks. Ribavirin dose adjustment was not required, as it has no major effect in inducing leukopenia/neutropenia.

Conclusion. The use of filgrastim mainly corrects neutropenia induced by antiviral therapy with peginterferon, in reversed proportional doses.

Filgrastim should be administered weekly for a period of time, medium and long-term benefits allowing continued specific antiviral therapy; this way the patient is not deprived of a completely continuous treatment, often accompanied by SVR.

Triple Therapy in HCV Infection

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Background. WHO estimates that approximately 170 million individuals, or 3.1% of the world population, are infected with HCV. With the current standard of care, only 40% to 50% of genotype 1–infected patients achieve a sustained virologic response (SVR). In the last years we have achieved significant progress in the treatment of HCV infection. The current study estimates the virologic response rates and adverse effects in two groups: 1) pegIFN/RBV and boceprevir and 2) pegIFN/RBV and telaprevir

Methods. We included 10 treatment-experienced patients in the group of pegIFN/RBV and telaprevir. We included 25 treatment-experienced patients in the group of pegIFN/RBV and boceprevir.

Results. Triple therapy has greatly increased treatment complexity; it involves multiple daily pills plus injection of the drug. Increased risks with non-adherence to triple therapy include a potential for resistance

The most notable adverse events occurring more frequently with boceprevir-based therapy were: anemia in 15 patients, Hb 12.10 g/dL in 6 patients, 10.8 g/dL in 7 patients, 8.6 g/dL in 2 patients; rash in 2 patients; dysgeusia in 10 patients; hepatic decompensation (ascites) in 1 patient (therapy interruption); and extrasystolic arrhythmia in 2 patients.

Telaprevir-related adverse events were, in our experience: purpura, pruritus, hyperuricemia, rash.

Conclusion. SVR rates with boceprevir or telaprevir in genotype 1 treatment-naïve patients are 63-75% vs. 38-44% for bitherapy. SVR rates with boceprevir or telaprevir vs. pegIFN/RBV therapy: relapsers: 69-83% vs. 24-29%; partial responders: 40-59% vs. 7-15%; null responders: 29-38% vs. 5%. Boceprevir or telaprevir + peginterferon and ribavirin represent the new standard of care for genotype 1 HCV patients previously untreated or with previous treatment failures.

Poster presentations

Evolution of Metabolic Liver Disease in the Follow-up of HIV-HBV Coinfected Patients

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Background. Due to common routes of transmission, HIV and HBV are frequently found in concomitant infection. The dynamic of liver disease in coinfected patients needs to be better understood.

We report a study which aimed to describe the evolution of steatosis and non-alcoholic steatohepatitis (NASH) in HIV-HBV coinfected patients, over 5 years of follow-up.

Methods. Stored samples of HIV-HBV coinfected patients (n=73) were analysed using a non-invasive method for hepatic disease evaluation (FibroMax, Biopredictive, Paris) in a retrospective longitudinal study. Steatosis/NASH progression was defined as the gain of at least one stage on the FibroMax scale during follow-up.

Results. Patients were mostly male, with the following baseline median (min-max) characteristics: age 42 years (19-68), body mass index 21.54 kg/m^2 (17.11-33.95), known duration of HIV disease 11.45 years (1-19.3), CD4 count 400 cells/cmm (37-1,021) and duration of HIV treatment 7 years (1.05-15.46). At baseline 69.8% of patients had an HBV-DNA <2,000 IU/mL, while 71.2% had an HIV-RNA<200 cp/mL. The median follow-up interval was of 5 years (1.7-7.1). At baseline and at the secondary time-point, 59% and 54.7% respectively presented steatosis (of whom 20.5% and 15% significant steatosis - S234), while 31.5% and 30.1% respectively had NASH. During follow-up a total of 16.4% progressed in terms of steatosis and 20.5% in terms of NASH, while 23.3% regressed in terms of steatosis and 19.2% in terms of NASH.

Conclusion. This study supports the evidence that steatosis and NASH are common findings among HIV coinfected patients; risk factors associated with metabolic liver diseases in this context need further investigation.

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Unusual Evolution of a Patient with Autoimmune Thyroiditis Related to Interferon Therapy

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Background. Pegylated interferon and ribavirin represent the gold standard of the current therapeutic regimen for HCV infection. Among the side effects reported to interferon therapy, autoimmune thyroiditis is one of the most important. Some patients develop hypothyroidism, some hyperthyroidism and other have a biphasic evolution while a small percentage already have antibodies against thyroid-peroxidase (ATPO) and/or antibodies against thyroglobulin (TG-Ab) when they are diagnosed.
Case report. We present the case of a 34 year-old female who had been admitted to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" for a chronic liver disease, which finally was diagnosed as HCV infection. She was already in treatment with thiamazole for hyperthyroidism; ATPO and TR-Ab (antibodies against TSH-receptor) were negative.
As she developed ophthalmopathy, we initiated corticotherapy at low doses for a short time, with favorable outcome.
One year later we initiated the specific antiviral therapy (48 weeks duration), with careful monitoring of the thyroid status. During treatment the patient developed ATPO, and from hyperthyroidism she passed into hypothyroidism, and for that reason thyroid substitution (levothyroxine) was started.
The outcome was favorable, so that after the end of treatment the patient had undetectable viral load at 3-6-18 months; normal thyroid status at 12 months; pregnancy in evolution for 6 months at 16 months after the end of treatment.
This case reflects that even if autoimmune thyroiditis is a frequent side effect of antiviral therapy, it does not represent a contraindication (except in some cases, e.g., malignant ophthalmopathy); it is treatable, and sometimes reversible.
We underline the importance of careful endocrine monitoring both during and after treatment.

Erythema Nodosum, Pulmonary Fibrosis, Nephropathy – Extrahepatic Manifestations of Chronic HCV Infection or Autoimmune Epiphenomena during Peg-IFN Treatment?

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Background. HCV infection is associated with pleiotropic extrahepatic manifestations (cutaneous, renal, glandular, vasculitic, immune system disorders), the pathogenic mechanism being indirect, immunologically mediated. The alpha-interferon treatment may induce various adverse events (dermatological, autoimmune, pulmonary, renal), quite similar to some extrahepatic manifestations of HCV infection, thus raising etiologic and therapeutic controversy.
Our objective was to reveal the etiology of erythema nodosum, pulmonary fibrosis and nephrotic syndrome in a female patient with chronic HCV infection, during standard of care (SOC) antiviral treatment.
Case report. We present the case of a 61 year-old diabetic (DM) and hypertensive female patient, who in the last month of SOC antiviral treatment (pegylated interferon alpha-2b (pegIFN), ribavirin), developed erythema nodosum, diffuse interstitial pneumopathy and nephrotic syndrome. After exclusion of infections, paraneoplasia, collagen-vascular diseases and sarcoidosis, the etiological framing for both erythema nodosum, and interstitial lung fibrosis was "autoimmune epiphenomena, during pegIFN treatment". Alteration of renal function, in the last quarter of SOC therapy, suggested the possible association of an autoimmune pathogenic mechanism to a pre-existing nephropathy (secondary to DM and by nephroangiosclerosis), suspicion that imposed performance of renal biopsy.
Autoimmune manifestations were refractory to corticoid therapy, imposing the use of immunosuppressants (cyclophosphamide), with careful HCV virological monitoring.
Conclusion. Erythema nodosum and pulmonary fibrosis may represent extrahepatic manifestations of HCV infection, as well as adverse events during pegIFN treatment. In the presented case, identification of the prevalent cause was supported by the subcutaneous and pulmonary changes onset timing, eventually SOC treatment readministration may be a therapeutic evidence. Nonetheless, the nephropathy is plurietiological, renal biopsy being essential for the characterization of the main pathogenic mechanism and of the course of treatment.

Distribution of IL28B polymorphism in Romania, in patients with hepatitis C, relapsers and nonresponders to interferon and ribavirin therapy

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Background. The aim of antiviral therapy in hepatitis C is the eradication of infection. Recent data have drawn the attention of researchers towards a host-associated genetic determinant of response to treatment, interleukin 28B (IL28B).
Methods. We performed a cross-sectional study to determine the distribution of IL28B rs12979860 polymorphism in patients with chronic hepatitis C virus (HCV) infection which were considered relapsers and nonresponders to interferon and ribavirin according to European guidelines (*European Association for the Study of the Liver* – EASL). The statistical analysis included the χ^2 and *unpaired t* tests, with a cut-off value of 0.05 for statistical significance (GraphPad InStat v3.05, USA).
Results. The study included 102 Caucasian patients (53.5% females, median age 55±8 and 46.5% males, median age 53±10). The differences between the two groups were not statistically significant with a confidence interval (CI) 95% of (-6.519; 1.245), p=0.18. In females, the median age was 55±8 for nonresponders, and 56±9 for relapsers. In males, the median age was 53±9 for nonresponders and 54±12 for relapsers.
Nine (9%) of the patients who did not elicit sustained viral response (SVR) displayed the CC genotype, 74 (72%) CT and 19 (19%) TT. Among relapsers, 6 (6%) displayed the homozygous CC genotype, 30 (29%) CT and 8 (8%) TT. Among nonresponders, 3 (3%) displayed the CC genotype, 44 (43%) CT and 11 (11%) TT. Thus, in patients without SVR, genotypes CT and TT were more prevalent in nonresponders, while the CC genotype was more prevalent in patients which initially responded to treatment but subsequently relapsed.
Conclusion. The predominance of CT and TT genotypes in nonresponders may have been one of the determining factors for the lack of response to interferon and ribavirin therapy.

Clinical and Histological Aspects of Chronic Hepatitis C in Bihor County

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Background. Hepatitis C virus (HCV) infection is currently the most important cause of chronic hepatitis. WHO estimates that about 3% of the world population is infected with HCV. In a study conducted on 2,022 patients with chronic liver disease in Romania, 90.8% had viral etiology, and of these, 64% were caused by HCV.
Methods. The study included a total of 274 cases of chronic viral hepatitis C cases which were selected in a period of 4 years from the total number of patients hospitalized in the Oradea Hospital Emergency Department for Gastroenterology. A histopathological study of liver biopsies followed the necroinflammatory activity and fibrosis development patterns and their classification according to the Histological Activity Index of Knodell and METAVIR. Excluded from the study were those diagnosed with liver cirrhosis (F4).
Results. Of the 274 biopsies performed in patients with chronic viral hepatitis C, the following serological examination were diagnosed: 12 cases with chronic viral hepatitis B and C and 7 cases with chronic viral hepatitis B+C+D. Most cases (66.05%) belonged to the age group between 35 and 55 years and more than half were women (61.87%). At the time of puncture 50.72% had moderate and severe necroinflammatory activity with predominance in females (50.72%). The distribution of inflammatory cells varied from case to case, but all cases were characterized by the presence of a dense monocytic infiltrate in the portal areas. 146 cases had portal and periportal fibrosis without septa (F2) or with rare septa (F3), and 32 patients were diagnosed with severe active chronic hepatitis C virus (A3-F2 and A3-F3). 100 showed fatty degeneration. Steatosis was identified by the presence of vesicles in the cytoplasm of hepatocytes due to dissolution of bare optical lipids during inclusion in paraffin, with net limits of various sizes.

Hepatitis B in Children - 18 Years after Vaccine Approval in Romania - Clinical and Epidemiological Observations

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Background. Hepatitis B in Romania remains a public health problem because of higher prevalence among the native population compared to other civilized countries. Worryingly, new cases occur among children despite free vaccine introduction almost 18 years ago. We tried to identify correlations between the type of HBV infection, the disease, response to therapy and identifiable factors that could improve prevention of this infection among children.
Methods. We performed a retrospective study of clinical and epidemiological information by analyzing data from patients in the authors' care since 2002.
Results. Almost all patients acquired the infection by vertical transmission from mothers, and in most cases they had not been tested antenatally or had not applied all measures of prophylaxis at birth. In 4 of the 40 cases studied HBsAg seroconversion was achieved (2 cases after the acute phase of the disease, one case after 16 years of evolution, one after 4 years of evolution). Others are still patients out of care, with limited effective treatment options due to age.
Conclusion. Improving antenatal testing for vertically transmitted diseases, application of all existing prevention measures (including gratuity or compensation for specific immunoglobulins), increasing the number of vaccinations among non-adherent populations to health services can be effective measures to decrease the prevalence of HBV infection among children who later become major consumers of health resources in the very long term.

Chronic Hepatitis C and Pseudothrombocytopenia. A Case Report

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Background. Pseudothrombocytopenia, caused by ex vivo agglutination of platelets is an uncommon phenomenon. As a result, platelets counts reported by automated counters may be much lower than the actual count in the blood because these devices cannot differentiate platelet clumps from individual cells. Antiviral treatment can be prescribed only if the platelets count is above 100,000/µL, so it is very important to know the real platelet count.
Case report. We report a case of a 58 year-old female diagnosed with chronic hepatitis C and treated with standard of care therapy (peginterferon α2a plus ribavirin) for 48 weeks. The diagnostic criteria were biochemical (elevated liver enzymes – 2 times the upper limit), virological (3,148,000 IU/mL HCV-RNA) and histological (A2-F3 – Metavir score).
In the beginning the platelet count was normal (168,000/µL), but after the first week of treatment the value decreased to 18,000/µL. During treatment the value decreased dramatically (the lowest count of platelets was 11,000/µL). These values were determined by automated cell counters. The platelet count was above 100,000/µL every time when we used examination of the blood film.
This case had a very good outcome. The treatment period was completed (48 weeks) with sustained virological response (SVR) without clinically significant hematological side effects. The antiviral treatment wasn't interrupted, but the patient was monitored closely (at 2 weeks).
Conclusion. A severe thrombocytopenia on blood counter must be confirmed by microscopic examination of the blood film for identification of pseudothrombocytopenia to avoid unnecessary diagnostic tests and treatment.

Vitamin D and Chronic Hepatitis C Treatment Response

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Background. The study's aim was to correlate the vitamin D (25OHD) serum level with the outcome of the patients in treatment for chronic hepatitis C (CHC).
Methods. Prospective study including CHC patients from the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" Department III, who received antiviral standard bitherapy between January 2010 and August 2011.

The samples for 25OHD levels were collected in the summer and autumn and were assessed using the ARCHITECT system chemiluminescent microparticle immunoassay. 25OHD deficiency is considered < 30 nmol/L and insufficiency <75 nmol/L.
Results. The study group consisted of 46 patients, male:female ratio 1:1.9, median age: 48 years (18-65). Six patients were in retreatment.
At the end of the study period, we found 9 non-responders, 3 with breakthrough, 2 relapsers and 22 sustained responders (SVR), 10 patients being in follow-up.
The median level of vitamin D in the entire group was 61 nmol/L.
The women in the study group had a median 25OHD level slightly higher than men (62.5 vs. 58 nmol/L) without statistical significance.
The retreated group had a 52.7 nmol/L average level, versus 62.2 in the naïve group.
The SVR patients had a non-significantly higher 25OHD level than the others (63.2 vs. 58.9 nmol/L).
Conclusion. We didn't find a clear correlation between the serum 25OHD level and the outcome of the CHC. Despite the fact that in the summer-autumn period the highest level of 25OHD is expected in European countries, the entire group proved to be 25OHD insufficient.
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Magnetic Resonance Spectroscopy in the Evaluation of Minimal Hepatic Encephalopathy: A Pilot Study

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Background. Minimal hepatic encephalopathy (MHE) is the mildest form, where patients with deteriorated liver function show quantifiable psychological abnormalities despite a normal clinical neurological examination.
We aimed to identify Magnetic Resonance Spectroscopy (MRS) anomalies in patients with MHE, to correlate the MRS parameters with clinico-biological information and to evaluate the risk of a patient with MHE to develop an episode of clinical hepatic encephalopathy (HE) using MRS.
Methods. Fourteen patients were enrolled in this pilot study, in two groups. Group A had 8 patients with clinical suspicion of MHE (4 male, 4 female), and group B contained 6 patients with chronic liver disease without neuropsychological defects (4 male, 2 female). All the patients were submitted to comprehensive clinical, psychological (PHES) and biochemical tests (including arterial ammonia) and, in the same day, subjected to an MRS examination (1.5 T machine, short TE, parietal white matter). They were followed-up for 6 months after the test.
Results. MRS changes such as increased glutamate complex to creatine ratios were found in patients from group A (2.52±0.14 vs. 1.78±0.10, p=0.0008). Neither myoinositol values nor ammonia correlated with the presence of MHE. One patient from group A developed clinical HE; he also had the most important MRS anomalies.
Conclusion. MRS data correlates with neuropsychological information in patients with MHE, and also could have a role in predicting the evolution of these patients to clinical HE. The first results are encouraging but larger groups of patient are required.

Study of the Evolution and Treatment of *Helicobacter pylori* Infection in Patients with Chronic Viral Hepatitis

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Background. *Helicobacter pylori* (HP) is a Gram-negative bacteria, spiral and flagellated, that is fixed in the gastric mucosal crypts by inducing chronic inflammation, gastritis, gastric and duodenal ulcers, increased risk of gastric cancer and is associated with the occurrence of MALT type lymphoma (hematologic malignancies of lymphoid tissue of the gastrointestinal mucosa).
We studied the evolution of *Helicobacter pylori* infection under treatment in patients with chronic viral hepatitis treated with antiviral drugs, interferon (IFN) and ribavirin (RBV), and "liver protective" medication.
Methods. We processed clinical and biological data of 48 patients with chronic HCV hepatitis treated with IFN and ribavirin, 12 patients with chronic hepatitis C without antiviral treatment and 18 patients with chronic hepatitis B, only with "liver protective" medication, all showing *Helicobacter pylori* infection.
Results. Positive diagnosis was established through serum determination of anti-HP antibodies (anti-HP IgG; immuno-chromatography).
HP therapy consisted of 3 monthly courses of 10 days/month with amoxicillin 3 g/day, *tinidazole* 2g/day, bismuth subcitrate (De-Nol) 700 mg/day and pantoprazole 40 mg/day.
Therapy after diagnosis was performed by testing the presence of HP Ag in stool (immunochromatography - tapes). In 10 patients who were in the group with IFN and RBV therapy, after 4 cycles of 14 days with levofloxacin 500 mg, clinical symptoms disappeared and HP Ag in stool turned negative. There were no developmental differences between chronic hepatitis C and B without antiviral treatment for the anti-HP treatment mentioned. The sex of the patients did not correlate with the difference in response to therapy.
Conclusion. INF and RBV antiviral treatment applied to patients with chronic hepatitis C required a change of anti-HP medication and a longer course of therapy. The evolution of these cases was prolonged, with slow improvement of clinical symptoms, with persistent dyspeptic syndrome and prolonged asthenic syndrome (months) compared to the group without antiviral therapy

Materno-fetal Transmission of Viral Hepatitis B in Constanţa

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Background. We aimed to evaluate transmission of hepatitis B virus (HBV) from mother to child in Constanţa County during a period of 36 months (January 2009 – December 2011).
Method. Retrospective and prospective study on a group of 35 HBsAg positive pregnant women and their babies. For mothers we took into consideration the level of alanine-aminotransferase (ALT), HBsAg, HBeAg and anti-HBe, HBV-DNA, and also HIV Ab. For infants we checked the levels of ALT, HBsAg, anti-HBs, HBeAg and anti-HBe, and also HIV Ab.
Results. Mothers ages' ranged from 18-38 years, with an average of 25.07 years; 8 women were HBeAg positive. ALT in 14 women were within normal limits, and in other cases the maximum value was 3.5 times the normal limit. HBV-DNA viremia was performed by TaqMan method during pregnancy in 19 women, identifying an average 49,000 IU/mL (limits: 28-23,500,000 IU/mL). Twenty-one of the women had C-section and 20 didn't breastfeed. Five women were coinfected HBV and HIV. Fourteen children received specific prophylaxis with anti-hepatitis B immunoglobulin in doses of 30-50 IU/bw; vaccination with Engerix-B was performed in all infants (scheduled at 0-2-6 months of age).

In two children revaccination was performed after the age of 1 year with good results – anti-HBs were positive. In 2 infants we found positive HBsAg and negative anti-HBs; they were born from mothers with high viral load (over 100,000 IU/mL), and one from an HBeAg positive mother. All children borne from mothers with HIV and HBV coinfection presented anti-HBs after one year of age.
Conclusion. The rate of transmission of HBV was low (5.71%) in our group of patients. Careful monitoring of pregnant women limited materno-fetal transmission of HBV infection. We did not register transmission of HBV or HIV in coinfected mothers to their children.

Preliminary Results of Chronic Hepatitis C Triple Therapy with Peginterferon + Ribavirin + Telaprevir

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Methods. We followed the clinical, biological and virological data from 22 patients who initiated and completed triple therapy with peginterferon-alpha (P) + ribavirin (R) + Telaprevir (T) + 2, from February 2012 to date.
Results. The 22 patients were represented by 12 males (54.5%) and 10 females (45.5%), aged between 43 and 64 years (with a median of 54 years), 3 treatment-naïve to antivirals (16%), 1 nonresponder to previous therapy (4%) and 18 relapses (80%) to previous therapy with peginterferon + ribavirin. All patients had advanced degrees of fibrosis: F3 in 9 patients (41%), F4 in 13 patients (59%); they had variable HCV-RNA levels, ranging from 70,200 to 5,584,000 IU/mL (median = 1,130,000 IU/mL).
HCV-RNA viremia was undetectable at 4 weeks in 20 patients (91%), and detectable with very low values (30 IU/mL and 70 IU/mL) in 2 patients (9%).
HCV-RNA at 12 weeks was undetectable in all patients (100%)
Side effects were represented, in order of their frequency, by: 1) grade 1 anemia: 14 patients (63.5%); 2) grade 2 anemia: 3 patients (13.5%); 3) grade 3 anemia: 2 patients (9%); 4) hyperuricemia: 18 patients (82%); 5) pruritus ani: 18 patients (82%); 6) hemorrhoidal thrombosis: 18 (82%); 7) itching skin: 10 patients (45%); 8) dysgeusia: 2 patients (9%); 9) diarrhea: 1 patient (4.5%); 10) grade 1 rash: 2 patients (9%).
It was necessary to change the dose of ribavirin or peginterferon in 2 patients with grade 3 anemia who required correction of anemia with growth factors and red blood cell transfusion. No patient discontinued therapy in the first 12 weeks of treatment.
Conclusion. Preliminary results with PR + T triple therapy are encouraging in patients who relapsed and in naïve patients.

Demographic characteristics and IL28B polymorphism in treatment-naïve patients with hepatitis C

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Background. Given the recent development in the treatment of hepatitis C, the rs12979860 polymorphism of interleukin 28B (IL28B) has become an important instrument in evaluating the rate of sustained viral response, both for treatment with interferon and ribavirin, and for triple therapy, which associates a protease inhibitor.
Methods. In order to describe the population of treatment-naïve hepatitis C virus (HCV) infected patients in Romania, we performed a cross-sectional trial evaluating data on patient viral load, fibrosis and necroinflammatory activity (FibroMax and FibroTest, Biopredictive, Paris) and the results of the PCR TaqMan test for IL28B polymorphism.
Results. The study group included 62 Caucasian patients monitored at the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest, Romania, with 63% females (median age 47±15) and 37% males (median age 39±17).
Thirteen (21%) of these patients presented CC genotype, 39 (63%) CT, and 10 (16%), TT genotype, which suggests that a relatively low proportion of these patients would exert sustained viral response after double therapy.
The median value of fibrosis was 0.28±0.23 (equivalent to F1 on the METAVIR scale), with the following distribution according to the IL28B genotype: 0.19±0.07 CC, 0.35±0.22 CT and 0.16±0.29 TT.
The median necroinflammatory activity was 0.34±0.26 (equivalent to A1-A2) for the whole study group, with the following distribution: 0.36±0.22 CC, 0.29±0.29 CT and 0.34±0.27 TT.
The median viral load was 286,855 IU/mL for the whole study group, respectively 280,488 for CC, 307,004 for CT and 293,223 for TT. To ensure an increased external validity, the study group needs to be extended to include patients from different regions in Romania.
Conclusion. The IL28B polymorphism is useful in the evaluation of patients with chronic HCV infection prior to starting therapy, adding to the body of knowledge which guides the choice of therapy.

Ora-Quick Rapid Test for HCV – A New and very Interesting Strategy. A 194 Drug Users Study in a French Center: Csapa 52

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Background. In France officially 50% to 70% of the drug users (DU) are infected with HCV. Almost 20% of them have issues with blood access, and 33% of them never get serologically tested.
Methods. During May, 194 patients with substitution treatment received a prescription to have blood drawn for performing the serology against HIV, HBV and HCV (ELISA 3 generation).
During June all of these patients received a proposition to do a rapid test with blood finger (Ora-Quick).
After this study we compared the sensitivity, specificity and compliance for these two tests.
Results. In May 147/194 DU (75.8%) underwent blood tests. 18 (12.2%) were found positive against HCV (ELISA 3 generation).
In June all of the 147 DU received a proposition for a rapid test. All of them accepted (100%). 17 (11.56%) were positive with this test, which displayed a good sensibility and specificity.
Among the 47 DU who did not take the venous blood test, 44 (97%) accepted a rapid test during the clinical check-up. 9 DU were positive (20.4%). But more interestingly, 21/44 (48%) DU developed a major anxiety symptom during the 15 minutes of waiting for the test results and needed help and medical assistance. Our results are similar to those of Lee SR et al. J Virol Methods 2011; 172: 27-31
Conclusion. Blood tests like Ora-Quick HCV are secure. We can use them for routine testing in large populations of drug users.
Among DU who refused to take the classical test, we indentified a higher proportion of infection, 11.5% versus 20.4%; they need medical help. In the future we can develop prevention programs using these tests for DU. In all addiction centers, the new personnel and DU need rapid testing for HCV, HBV and HIV, and all team members require training, which in our opinion is an epidemiological priority.

Cryoglobulinemic Vasculitis Secondary to Hepatitis C Infection: Clinical Spectrum, Severity and Management in a Tertiary Teaching Hospital

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Background. One of the causes of vasculitis is cryoglobulinemia, which usually is secondary to chronic hepatitis C virus (HCV) infection. We present the eight year assessment of the incidence, clinical spectrum and management of cryoglobulinemic vasculitis (CGV) secondary to HCV infection in an Internal Medicine Department.
Methods. We included 319 consecutive patients with chronic HCV infection admitted to our tertiary teaching hospital between 01.01.2004 and 31.12.2011. In those with CGV we assessed the clinical features, biologic, inflammatory and immunologic status, as well as the duration of infection, viral load, Histological Activity Index (HAI) and disease activity (assessed with the Birmingham Vasculitis Activity Score, VAS 2003).
Results. Of our 319 patients, 26 had CGV; 16 had a duration of the disease >36 months (mean duration ± SD: 45.8±11 months, range 7-96 months). Seventeen of all the 26 patients had cutaneous involvement, 22 neurologic involvement, 11 renal dysfunction, 5 joint involvement and 1 had antiphospholipid syndrome. In 18 (69.23%) patients the ESR was >25 mm/h, 14 (53.84%) had abnormal levels of CRP and 8 (30.76%) had low complement levels. The HAI was >9 in 19 patients, and the mean VAS 2003 was 11. Severe vasculitis was associated with duration of infection >36 months (p=0.045), renal involvement (p=0.040), lower levels of complement (p=0.042) and viral load <800,000 IU/mL (p=0.041). Four patients died in spite of intensive treatment (1 cerebral vasculitis, 2 severe infections and 1 acute hepatic failure).
Conclusion. The clinical spectrum in our patients is similar to the literature data; in our patients, results of simple "routine" tests appear to have some genuine associations with disease severity. This finding – which is a confirmation of our previous report – may be the first step towards the development of a clinical prediction tool that has the potential to guide treatment.
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Management of Side Effects in Treatment of Chronic Viral Hepatitis C with Peginterferon alpha-2a and Ribavirin

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Background. Hepatitis C is a global public health problem. Over 200 million people worldwide are infected with hepatitis C virus and there are 3-4 million new cases registered annually in the world. Rising incidence of chronic hepatitis with hepatitis C worldwide is an ongoing challenge to improve therapeutic discretion of the management. It is well known that the treatment of choice is combined antiviral interferon and ribavirin. The spectrum of adverse effects includes symptoms which are well known and described in the literature.
Methods. In the study we included 84 patients with a diagnosis of chronic hepatitis C who received antiviral treatment: combined peginterferon alpha-2a (Pegasys) plus ribavirin (Copegus) for a period of 48 weeks. The interferon dose was 180 µcg i.m. once a week and the ribavirin dose was 1,000 to 1,200 mg, depending on body weight. The duration of treatment was 48 weeks.
Results. Our study revealed the following side effects: 1) local adverse responses: hyperemia – 17.9%, edema – 7.5%, pain – 7.5%; 2) early adverse responses: fever – 73.2%, headache – 47.3%, arthralgias – 42.6%, myalgia – 41.2%; 3) late adverse responses: loss of weight – 59.7%, inappetence – 32.1%, loss of hair – 22.4%, insomnia – 14.8%, somnolence – 12.3%; 4) hematological adverse response: anemia – 31.3%, leukopenia – 35.8%, thrombocytopenia – 23.9%.
Citomix was administered for 5 days, 10 granules sublingual each morning and evening, 15 minutes before the meal, then each 3 granules for 1-2 months. On Sundays, the preparation was not administered. Lymphomyosot was administered 1.1 mL i.m. – the first injections every other day, then every third day, up to a total number of 10.
Conclusion. The management of adverse responses must follow the importance and their severity; treatment needs to be always interdisciplinary. Side effects were local and general (early and late). The treatment of side effects was performed with citomix and lymphomyosot.

SESSION 8. Treatment of infections with Gram-negative bacilli

Oral presentations

Pseudomonas aeruginosa Bacteremia and Risk of Death: is Thrombocytopenia an Indicative Factor for Them?

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Background. The study was initiated after managing the case of a patient with *Pseudomonas aeruginosa* sepsis and inexplicable, severe thrombocytopenia (ST) which was non-responsive to therapy and led to a fatal outcome.
We aimed to evaluate the association between ST (in the absence of disseminated intravascular coagulation, DIC) and invasive infections with Gram-negative bacilli (GNB) and to assess the association between ST in patients with *P aeruginosa* infection and mortality
Methods. Cohort study of all adult patients with P aeruginosa bacteremia admitted to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" between January 2010 and August 2012 (group I = 10 patients). We compared group I to another 10 patients with bacteremia caused by other GNB (group II). The following characteristics were assessed: the presence and severity of thrombocytopenia, comorbidities which might influence platelet count, the presence/absence of DIC and 30-day-mortality. Thrombocytopenia was defined as an absolute platelet count of <100,000/cmm, and ST<50,000/cmm.
Results. Thrombocytopenia was present in 7/10 patients from group I (6 patients with ST). None of these patients had DIC or any other underlying diseases/other factors to explain the thrombocytopenia. Thirty-day mortality was 6/10. In group II there were 3 patients with thrombocytopenia (one patient with ST), but 2/3 patients with thrombocytopenia had liver cirrhosis. None of the patients from group II had DIC. Thirty-day mortality in group II was 2/10.
Conclusion. ST, in the absence of DIC, can represent a surrogate marker for *P aeruginosa* infection in patients with sepsis and could predict a fatal outcome.

Severe Infections with *Pseudomonas aeruginosa* in Children – Clinical Particularities and Therapeutic Modalities

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Background. *Pseudomonas aeruginosa* is an important pathogen responsible for severe community-acquired and nosocomial infections, in immunocompromised hosts and even in healthy persons.
Pseudomonas infection may involve any part of the body, including the skin. *Pseudomonas* is a seed which grows on dry skin, but infections often occur on areas where the skin is exposed to prolonged moisture. Dermatological manifestations in *Pseudomonas* sepsis consists of 4 types of lesions: vesiculobullous lesions, gangrenous cellulitis, nodular or macular lesions and ecthyma gangrenosum.
Case report. We report 3 cases of children, aged between 0-3 years, admitted in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" for *Pseudomonas* infections. Case 1: gangrenous cellulitis in the upper lip; case 2: cellulitis in the left buttock; case 3: ecthyma gangrenosum in a child with neglected anal fissure.
The evolution was favorable with antibiotherapy, then children required surgery for skin necrectomy and grafts.
Conclusion. Recognition of cutaneous infection with *Pseudomonas* allows early establishment of appropriate antibiotic treatment, before obtaining bacteriological results, providing therapeutic success.
Although the presented cases were very severe forms of infection with *Pseudomonas*, evolution was favorable under proper treatment, with resolution of the infectious process, but with minimal skin damage.

Bacteria Isolated from Blood Culture and their Antibiotic Resistance Pattern

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Background. Study of etiological agents isolated from blood culture and their antibiotic resistance profile in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş".
Method. Between January 1, 2008 and September 10, 2012 1,252 bacterial strains were isolated from blood culture. Identification of bacteria and antibiotic susceptibility testing were performed in automated system Vitek2 Compact and MicroScan.
Results. Bacteria isolated were mostly Gram-positive (*S aureus* 234, coagulase-negative staphylococci 258, alpha-hemolytic streptococci 126); we also isolated Gram-negative bacteria: *E coli* (216) and *K pneumoniae* (85). Oxacillin resistance in *S aureus* increased from 36.4% to 59.4% for erythromycin 45.5-56.2% and decreased for rifampin (25.0-8.3%) and ciprofloxacin (20.5%-12.5%); there were no resistant strains to trimethoprim-sulfamethoxazole, vancomycin and linezolid. Resistance in coagulase-negative staphylococci is higher to all antibiotics compared with *S aureus*: oxacillin (87.9-59.4%), erythromycin (72.4-56.2%). During the study period, *E coli* showed variation in resistance: amoxicillin-clavulanic acid with a minimum of 8.0% and maximum of 13.9%, piperacillin-tazobactam 9.7% and 24.0%. In 2011-2012 there was a small increase of resistance to quinolones (levofloxacin 27.3-33.3%) and to trimethoprim-sulfamethoxazole (33.3-35.7%). *K pneumoniae* resistance was almost linear between 2008-2012 for third and fourth generation cephalosporins (40.0-53.6%). ESBL producing strains increased in *E coli* in the last years from 3.4% (2009) to 25.0% (2012). In *K pneumoniae* the percentage varied between 33.3% (2008) and 53.3% (2010), with a slight decrease in 2011-2012 (40.0%).
Conclusion. The most frequent isolated strains were *S aureus* and coagulase-negative staphylococci, followed by *E coli* and alpha-hemolytic streptococci. MRSA strains increased from 36.4% (2008) to 59.6% (2012). ESBL-producing strains of *E coli* increased in the last two years.

Sepsis in Diabetic Patients: Microbiologic Particularities

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Background. Infections in diabetic patients evolve with a particular severity and represent a frequent cause of metabolic failure.
Methods. We performed a retrospective cohort study which included 445 adult patients with sepsis hospitalized in the Infectious Diseases Hospital Iaşi during January 2008 – December 2010. For the statistical analysis we used confidence intervals for a significant limit of 95% and as tests for differences - χ^2 test and t-Student test.
Results. Among 445 patients with sepsis, 95 diabetic patients (21.35%) were identified. Most frequently, the etiologic agents in diabetic patients (DM) were Gram-negative bacilli (GNB, 41.1%), compared with non-DM (35.4%) (p=0.374); the microbial gateway was urinary in 41% and cutaneous in 12.8% of cases. Staphylococcal etiology was documented in a lower proportion in diabetics than in non–DM (40% vs. 46.6, p=0.227), skin or soft tissues infection being associated more frequently with this etiology (*S aureus* 21.1%, SCoN 42.1%). In *S aureus* strains, the rate of resistance to oxacillin was 47.4% in DM patients and 33.3% in non-DM patients (p=0.388); resistance to rifampicin was 23.5% and 0% respectively (p=0.0003). The resistance rate of *E coli* strains to ciprofloxacin was significantly higher in DM patients (23% vs. 1.6%, p<0.05). ESBL-positive *E coli* strains were isolated with a similar frequency in DM and non-DM patients (11.5% vs. 12.3%, p=0.779). As prognostic scores, Charlson and SAPS II average values in diabetic patients were significantly higher than in non-DM (p<0.001), independently of clinical manifestations.
Conclusion. The etiology of sepsis wasn't significantly different in diabetic patients compared to non-diabetic persons, whereas the rate of resistance and Charlson score were higher in patients with diabetes mellitus who were more frequently hospitalized and previously treated with antibiotics.

Antimicrobial Resistance Trends in Gram-negative Sepsis and the Impact on Antibiotic Consumption

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Background. The objective of the present study was to analyse antimicrobial resistance trends in Gram-negative sepsis and the impact on antibiotic consumption.
Methods. The study involved the major pathogens isolated in the microbiology laboratory of Clinical Infectious Diseases Hospital, Romania, Cluj-Napoca, collected from patients with Gram-negative sepsis between 2000-2011. Targeted microorganisms included *Escherichia coli*, *Klebsiella pneumoniae*, *Pseudomonas aeruginosa*, *Enterobacter* spp., isolated from blood cultures, catheter tip cultures, urine cultures and tracheal aspirate. Bacterial identification and susceptibility testing were carried out with the Vitek2, API-bioMerieux system and the disk diffusion method, according to the guidelines of CLSI. Antibiotic consumption was expressed as daily defined doses (DDD) per 100 occupied bed-days and was assessed during 2007-2011.
Results. A total 4,733 strains were isolated (*E coli*, *K pneumoniae*, *P aeruginosa* and *Enterobacter* spp.). Among *E coli* strains, the resistance to ampicillin-sulbactam and ciprofloxacin increased from 21% to 42%, and from 17% to 72%, respectively (r^2 0.79; r^2 0.89). Resistance to ceftazidime and ciprofloxacin increased significantly among *K pneumoniae* isolates, from 35% to 73%, and from 26% to 73%, respectively (r^2 0.94; r^2 0.73). A high number of ESBL-producing strains were also noted in 2000-2011. There were significant increases in the resistance rate to carbapenems and amikacin (r^2 0.94) for *P aeruginosa*. The increasing trend in the antimicrobial resistance of *Enterobacter* spp. was significant for ceftazidime (r^2 0.82) and ciprofloxacin (r^2 0.72).
The total mean antibiotic use remained stable over time (2007-2011). Significant increases of antibiotic consumption for carbapenems (from 1 DDD to 6 DDD) and colistin (from 0.4 to 1.4; r^2 0.72) were noted. Ampicillin and ciprofloxacin consumption decreased substantially.
Conclusion. Analysis of data identified notable and significant changes during the study period. Increasing resistance prevalence of major Gram-negative pathogens to third-generation cephalosporins, ciprofloxacin and an alarming increase of resistance of *P aeruginosa* to carbapenems had an important impact on antimicrobial consumption.

Poster presentations

Considerations Regarding the Isolated Strains of *Pseudomonas* from the Hospital of Infectious Diseases and Pneumology Craiova

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Background. *Pseudomonas* spp strains isolated in hospital environment require supervision due to the risk of nosocomial transmission and antibiotic resistance. The study's objectives pursued epidemiological aspects and antibiotic sensitivity of *Pseudomonas* strains isolated in non-ICU departments of the hospital.
Methods. The retrospective study included 187 (non-repeatable) strains of *Pseudomonas* isolated from the pathological products obtained from patients hospitalized between 01.01.2006-01.09.2012.
Results. The annual number of cases has increased since 2009. The strains came from the Infectious Diseases Clinic (67.3%) and Pneumology (32.6%) and were isolated in children (20.4%) and adults (79.6%). The infection's locations were: respiratory (55%), ear (16.1%), digestive (10.1%), wounds (2.7%), blood cultures (1.6%), other sites (1.5%) and presented different features in children compared with adults for digestive and respiratory determination. Sensitivity to antibiotics: colistin (99.1%), quinolones (88.7%), cefoperazone-sulbactam (88%), aminoglycosides (87.7%), meropenem (84.4%), aztreonam (83.9%), piperacillin-tazobactam (82.1%), ticarcillin-clavulanate (77.3%), ceftazidime (73.8%), ceftriaxone (71.6%), cotrimoxazole (19 %), amoxicillin-clavulanate (16.1%).
Conclusion. The profile of resistance to antibiotics identified the circulation of strains predominantly involved in community infections, with features depending on the studied medical service.

Early Prosthetic Valve Endocarditis Due to *Acinetobacter baumannii*: A Case Report

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Background. *Acinetobacter* spp. are ubiquitous non-fermentative encapsulated gram-negative coccobacilli. Considered opportunistic pathogens, *Acinetobacter* spp. emerged as a major cause of nosocomial infections especially in intensive and postoperative care units. Although rarely reported, *A baumannii* may constitute a cause of early prosthetic valve endocarditis.
Case report. We report a case of endocarditis caused by *Acinetobacter baumannii* complex in a 51-year-old male who had undergone a surgical replacement of the mitral valve. The patient presented with fever for 3 weeks duration, fatigue and loss of appetite. His medical history revealed a thyroidectomy for thyroid adenocarcinoma four months before and a surgical replacement of the mitral valve one month before. The laboratory panel showed major inflammatory syndrome and mild anemia. The blood cultures were positive for *Acinetobacter baumannii* susceptible only to carbapenems, amikacin, colistin and levofloxacin.
The transesophageal echocardiogram demonstrated vegetation measuring 1.3/0.5 cm on the atrial side of the prosthetic mitral valve.
According to antibiogram results treatment with meropenem 3 g/day and amikacin 1,250 mg/day was started. One week after the beginning of treatment the transesophageal echocardiogram revealed the disappearance of the vegetation. Duration of antibiotic treatment was 8 weeks and the patient had a total recovery.
Selection of antimicrobials with adequate penetration into the vegetation was difficult, since there are no indications regarding *A baumannii* in current endocarditis guidelines and only a few case presentations are available in the literature.

Meningoencephalitis with *Shewanella putrefaciens* – A Case Presentation

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Background. *Shewanella putrefaciens* is a recently classified GNB with bacteriological characteristics similar to *Pseudomonaceae* (58-70%), occurring especially in warm and humid areas. *Shewanella* spp. infections are rare injuries of soft tissues, biliary tract, endocardium, eye, brain, joints, lung and ENT (ear-nose-throat diseases).
Case report. We present a case study based on the medical records of an 83 year-old male patient, from urban area, who was transferred from ER to the Hospital of Infectious Diseases Galaţi for possible purulent meningitis. Sudden loss of consciousness and consequent craniocerebral trauma 24h before were followed by fever and psychomotor agitation. Parkinson's disease and neglected ENT were noted from the personal medical history. CCT ruled out the cerebral lesions, but imagistic bilateral pansinusitis was suggested. Cerebrospinal fluid (CSF) characteristics were: cloudy appearance, proteinorrhachia 1,650 mg/dL, glycorrhachia 15 mg/dL, chlorinerrhachia 6.9 mg/dL, pleocytosis 8,000/cmm with 95% neutrophils. Gram-negative coccobacilli appeared on CSF smears. *Shewanella putrefaciens* was identified by microbial culture, followed by classical antibiogram. Preserved sensitivity to third generation cephalosporins, meropenem, ciprofloxacin, colistin, tobramicyn and tazobactam was specified. Carmeli Score 3, SIRS (t=38°C; cardiac rhythm >90 bpm; leukocyte >12,000/cmm) and meningeal syndrome with Glasgow Score 5 were revealed by clinical exam. Unfavorable evolution with meropenem treatment pointed to neurological, kidney and respiratory failure and justified the transfer to the Intensive Care Department. No epidemiological risk factors or major immunosuppression conditions were found, except for the age over 65. *Shewanella* spp. infections have been reported mostly in immunosuppressed hosts, after exposure to contaminated water. The lack of previous antibiotic treatment explained the preserved sensitivity to antibiotics and the success of the bacteriologic isolation. The unfavorable evolution with the antibiotic according to susceptibility testing could have been caused by the polymicrobial ENT infection, with probably incomplete bacteriological diagnostic.
Conclusion. A case of severe community-acquired meningo-encephalitis, developed into sepsis and MSOF, in an aged patient, was caused by a rare germ in our area, with uncertain clinical signification.

Klebsiella pneumoniae and *Enterobacter cloacae* - resistance phenotypes to Beta-lactam antibiotics in the Clinical Hospital of Infectious and Tropical Diseases "Dr. Victor Babeş", Bucharest

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Background. We performed a study to identify the resistance phenotypes to beta-lactam antibiotics of the *Klebsiella pneumoniae* and *Enterobacter cloacae* strains involved in infectious pathology.
Methods. We performed a retrospective study of the strains isolated from patients hospitalized in the Clinical Hospital of Infectious and Tropical Diseases "Dr. Victor Babeş" between January and September 2012. Antibioresistance phenotypes were identified through the standard diffusion method and the confirmation and determination of MIC values were made with the VITEK2C and E-test, according to CLSI 2011-2012. The "Champagne cork" synergism test induced by clavulanic acid was performed through the DDD method (Double Disc Diffusion), for the screening of extended-spectrum beta-lactamases (ESBL)-producing strains. The resistance to beta-lactams (first thru third generation cephalosporins, monobactams, cephamycins; with the exception of fourth generation cephalosporins and carbapenems) produced by beta-lactamase AmpC were identified through screening of resistance to cefoxitin (30 µg/disc), VITEK2C (MIC cefoxitin ≥8 µg/mL) and confirmed through the E-test method (AmpC-strip: cefotetan/ cefotetan plus cloxacillin CN/CNI). The modified Hodge-test was used for confirmation of resistance strains to carbapenems (MEM 30µg/disc, CMI ETP ≥8 µg/mL). Internal quality control: *E coli* ATCC 25923.
Results. 320 *Klebsiella pneumoniae* and 57 *Enterobacter cloacae* strains were studied; 47.8% were ESBL-positive *K pneumoniae* strains. Out of the 320 ESBL-positive *K pneumoniae* isolates, 49 were resistant to cefoxitin: 0.6% produced plasmid AmpC cephalosporinase (CN/CNI>8, E-test) and 14.7% were resistant to cephamycins by impermeability mechanisms. 5% of *K pneumoniae* strains presented ESBL-positive/CTX-M-like (cefotaximase). For 22/320 (6.8%) *K pneumoniae* with MIC for ertapenem (ETP) ≥8µg/mL (resistant to imipenem/IPM, meropenem/MEM), the modified Hodge test and the screening IP/IPI (E-test) were performed: 5.6%/ non-carbapenemases producing strains (porin loss and impermeability mechanisms); 0.6% MBL-positive *K pneumoniae*; 0.6% KPC-positive. 19.3% of *Enterobacter cloacae strains* were ESBL-positive; 5.2% ESBL-negative isolates were plasmid AmpC cephalosporinase-producing strains; 7.0% metallo-beta-lactamases /MBL)-positive isolates.
Conclusion. *Klebsiella pneumoniae* and *Enterobacter cloacae* represent a continuous challenge in identification of the resistance mechanisms to beta-lactams; these strains are usually multidrug resistant and for this reason the therapeutical options are very limited. The identification of carbapenemases-producing strains is a necessary laboratory screening process for optimal treatment. The described phenotypes need to be confirmed through genotypic methods.

SESSION 9. New diagnostic and treatment options in pediatric infections and pregnancy

Oral presentations

Meningococcal Sepsis in Children – Clinical Forms and Evolution

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Background. Meningococcal infection in children can present itself in various forms: asymptomatic, mild, medium, or severe cases which often result in death.
The objective of the study was to evaluate the clinical forms of meningococcal sepsis in children, the serotypes of meningococcus, as well as the evolution of the disease.
Methods. We have conducted a retrospective study over a period of five years (2007-2012) on cases of: meningococcal sepsis in children who were admitted in the Intensive Care Unit of the National Institute of Infectious Diseases "Prof. Dr. Matei Balş". In all patients we analyzed the following parameters: age, sex, background, clinical aspects and meningococcal serotypes.
Results. In the aforementioned period there were 48 admissions in our clinic with meningococcal sepsis diagnosis. Nine (18.8%) deaths were registered in cases that presented purpura fulminans and MSOF; death took place in less than 48 hours from admission. Out of 8 cases that required orotracheal intubation and mechanical ventilation, only 3 survived.
Most cases belonged to the 0-1 year age group (41.6%), in patients originating from rural areas (62.5%), with equal sex distribution. The following groups of meningococcus represented the etiological agent: 9 cases of group A, 18 of group B, 3 of group C and one case of group Y. In the other cases the etiological agent was not identified, the diagnosis being established on clinical criteria.
Conclusion. Meningococcal sepsis in children is a severe condition with a high mortality rate, especially when purpura fulminans is present. Serotype B meningococcus was the most frequent etiological agent in the studied cases, acute purulent meningitis being the most common clinical form of meningococcal infection.

Characteristics of Rotavirus Gastroenteritis in Hospitalized Children in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", Bucharest

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Background. Rotavirus (RV) gastroenteritis is an important cause of illness and death due to diarrhea in children younger than 5 years of age (29% of all deaths due to diarrhea). RV infections are more common during the winter and tend to be more severe in the age range 3-24 months. The route of infection is fecal-oral, with a very low infecting dose needed for infection.
We compared the demographic, clinical and laboratory characteristics of patients with rotavirus gastroenteritis to those with other causes of gastroenteritis.
Methods. The medical records of children aged 0–14 years hospitalized with acute gastroenteritis in our facility between 1 January 2012 and 30 June 2012 were retrieved. Patients with rotavirus gastroenteritis were compared with patients who were rotavirus-negative.
Results. The study group comprised 542 patients; 158 tested positive for rotavirus and 384 tested negative. Compared to patients with rotavirus-negative gastroenteritis, patients with rotavirus-positive gastroenteritis had a higher incidence of vomiting (146/158 vs. 226/384, 93% vs. 59%, $p<0.001$), lethargy (62/158 vs. 56/384, 40% vs. 15%, $p<0.001$), and dehydration (145/158 vs. 180/384, 92% vs. 47%, $p<0.001$). The need for intravenous rehydration therapy and the duration of hospitalization were higher in patients with rotavirus gastroenteritis.
Conclusion. Vomiting and dehydration are more common in hospitalized children with rotavirus gastroenteritis than in children with gastroenteritis due to other causes.

Intraorbital Abscess with *Scedosporium apiospermum* in a Healthy Child

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Background. *Scedosporium apiospermum*, a saprophytic germ frequently isolated from soil or water, is usually involved in the etiology of skin infections. Severe disseminated infections with high mortality rates have been recorded in immunocompromised patients. There are very few reports related to orbital damage of *Scedosporium apiospermum* in children. We describe an extremely rare case of

intraorbital abscess with *Scedosporium apiospermum* in a previously healthy child.
Case report. We present the case of a previously healthy 5 year-old child diagnosed with intraorbital abscess following an ocular trauma (eyelid contused wound with palpebral hematoma of the right eye), with unfavorable evolution after antibiotherapy and ophthalmological treatment.
Brain MRI showed images of intraorbital infraconal and extraconal abscesses with mass effect on the optic nerve, which imposed emergency neurosurgical intervention. From the pathological product prelevated during surgery we isolated a filamentous fungus identified by PLEX ID as *Scedosporium apiospermum*.
During voriconazole therapy for 12 weeks, a complete response was achieved and treatment was well tolerated.
Conclusion. We would like to point out the important role of the early identification and appropriate etiological treatment in the management of a fungal infection. In our case, the disease occurred in an immunocompetent child, with good outcomes but not without complications (optic nerve atrophy, right eye hypotropia, oculomotor nerve palsy). After remission of the inflammatory phenomena, the child required ophthalmological follow up and reconstructive treatment.

Varicellous Encephalitis with Fatal Evolution in a Child with Inaugural Diabetic Ketoacidosis

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Background. The main neurological complication of varicella is cerebellar ataxia. Varicellous encephalitis, altough rare, has a poor outcome with neurological sequelae, even death. The risk of complications in varicella is highest in immunocompromised hosts, newborns and adults. We describe a case of chickenpox encephalitis with fatal evolution in an immunocompromised child.
Methods. We present the case of a 3 year-old child, admitted in the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", for altered consciousness and seizures, occurring a few days after the onset of chickenpox exanthema. Clinical and neurological examination suggested the diagnosis of acute encephalitis complicated with coma. Laboratory findings showed severe hyperglycemia and inaugural diabetic ketoacidosis.
Brain MRI described numerous injuries (infra- and supra-tentorial) with mesencephalic, diencephalic and limbic structures involvement with inflammatory substrate evocative for encephalitis. The child underwent orotracheal intubation and mechanical ventilation. He received etiological treatment with acyclovir, antibiotics, corticosteroids, insulin therapy, IVIG, but the evolution was unfavorable, the child died after 46 days.
Conclusion. Varicella is a benign, self-limited disease but sometimes it can be fatal in a child with severe immunodeficiency caused by type I diabetes mellitus, through its initial presentation as diabetic ketoacidosis, which is the leading cause of morbidity and mortality in diabetic children. The simultaneous onset of two severe diseases led to the poor outcome and death of the child.

Antibiotherapy in the First Year of Life and Atopic Dermatitis – Study on Romanian Population

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Background. Atopic dermatitis is a disease whose incidence is continuously increasing. Administration of antibiotics in the first year of life is considered to be one of the factors which may influence the occurrence of the disease, but the studies are contradictory. This study analyzes the role of antibiotics in the occurrence of atopic dermatitis in a Romanian population group.
Methods. We carried out a cross-sectional study on 1,008 subjects regarding the administration of antibiotics in the first year of life and the occurrence of atopic dermatitis. All data were obtained by the distribution of questionnaires in schools and kindergartens. The analysis of data was made with MedCalc software, version 12.1.3.0.
Results. Out of the patients diagnosed with atopic dermatitis, 47.4% received antibiotics in the first year of life, as compared to 39.5% of those without atopic dermatitis. Antibiotherapy in the first year of life was not associated with atopic dermatitis in the simple logistic regression analysis (OR=1.38, p=0.13), nor yet after the adjustment for the other risk factors (OR=1.10, p=0.85).
Conclusion. Antibiotherapy in the first year of life does not seem to be associated with a significant risk for developing atopic dermatitis.

Sepsis with *Listeria monocytogenes* during Pregnancy

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Background. *Listeria monocytogenes* can be involved in serious invasive illness especially in well-defined high-risk groups including pregnant women. This infection remains largely under-reported and even more importantly, under-diagnosed. One of the most important risk factors for *Listeria monocytogenes* infection is the consumption of potentially contaminated food, especially unpasteurized products but also soft pasteurized cheese.
Case presentation. We present the case of a 28 year-old pregnant woman who was admitted to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" for fever which occured in the 16th week of pregnancy. The symptomatology started one week before admission with fever, malaise, headache and vomiting. She received only symptomatic medication. Clinical examination at admission revealed: SIRS (fever, tachycardia and polypnea), no alteration of mental status, discreet abdominal pain, dehydration. Laboratory data showed leukocytosis, with increased neutrophil count, positive procalcitonin, and a slight elevation of hepatic enzymes. We performed blood-cultures and then antimicrobial therapy was started with ampicillin-sulbactam. The patient was evaluated by the gynecologist and in utero death of the fetus was diagnosed. A therapeutic uterine curettage was performed.
After 24 hours, the blood-culture was positive and *Listeria monocytogenes* was identified. The antimicrobial regimen was modified and the patient received ampicillin for 14 days with favorable outcome. The anamnesis revealed that the patient had frequent consumption of unpasteurized cheese and milk.
Conclusion. A list of "risky" foods is necessary during pregnancy in order to avoid such complications.

The HPV-positive Pregnant Woman – High Obstetrical Risk

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Background. Infections with oncogenic strains of HPV represent the main cause of cervical intraepithelial neoplasia (CIN) and of cervical cancer. The risk factors determining the progression from HPV to cancer are unknown, including the HPV type, the infection intensity, the cell-mediated immunity. The immunologic mechanism can have great relevance within the immunologic changes of pregnancy, where the "immunologic paradox", the balance between the rejection and facilitation reactions, allowing the trophoblast implantation and maintenance of allograft, can lead to a different behavior of the organism faced with viral infection.
Methods. The prospective study of HPV infection in pregnant women comprised a number of 21,066 births which took place at the Clinical Hospital of Obstetrics and Gynecology "Prof. Dr. Panait Sîrbu", Bucharest between 2007 and 2011. We examined 11,375 pregnant women (54%).
The motivation to detect HPV was given by the Pap smear test suggestive of cellular disorders at the level of the cervix (6,109 cases) and positive colposcopy (288 cases).
Biopsy was performed in 74 cases, with the following results: CIN 1 – 40 cases, CIN 2 – 19 cases, CIN 3 – 10 cases, in situ carcinoma – 4 cases, invasive microcarcinoma – 1 case.
In the cases with suspicion of positive Pap smear and suspicious colposcopy, we found HPV LR (low risk) strains – 2,233 cases and HR (high risk) – 288 cases. 2,298 cases were known for HPV infections, and in 223 cases, the infection was detected during the current pregnancy. Pregnancy ended in birth in 148 cases with HPV HR and in 2,114 cases with HPV LR strains.
Conclusion. We consider that HPV positive pregnant women have a high obstetrical risk because the persistence of HPV infection in the genital tract cannot be controlled with the known methods; the frequency of HR lesions imposes the detection of strains with this potential, as well as birth by C-section; the frequency of HPV infection with ascending transmission to the newborn requires effective detection to avoid child infection.

Poster presentations

Aspects of Gastroenteritis with Rotavirus in the Clinical Hospital of Infectious Diseases Constanţa

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Romanian Society of Infectious Diseases

Background. Gastroenteritis with rotavirus (RV) is the leading cause of severe diarrhea among infants and young children. It is transmitted by the fecal-oral route, via contact with contaminated hands, surfaces and objects, and possibly by the respiratory route.
We evaluated the incidence of nosocomial infections with rotavirus in children, along with the clinical and therapeutical aspects of the disease.
Methods. Retrospective study of cases of gastroenteritis determined by rotavirus in children admitted to the Clinical Hospital of Infectious Diseases Constanţa in 2011. Diagnosis and detection: specific diagnosis of infection is made by identification of the virus in the patient's stool by enzyme immunoassay.
Results. From the total of 301 patients with ages between 6 months and 11 years diagnosed with infection with rotavirus, 53 were cases of nosocomial infection – pediatric general ward, pediatric surgery, intensive care unit, infectious diseases. The incidence was increased during the cold season (56.14%). The sex-ratio M:F was 1.21:1. Children between 1-2 years were more affected than others (50.49%). Rotavirus gastroenteritis is a mild to severe disease characterized by vomiting, watery diarrhea, fever. Dehydration is more common in RV infection than in most of those caused by bacterial pathogens. Treatment is nonspecific and involves maintenance of hydration.
Conclusion. RV infection is one of the most important causes of nosocomial diarrhea in children and can prolong the period of hospitalization. The contagiosity is high.

Severe Complications of Varicella in Immunocompetent Children

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Background. Chickenpox (varicella) is typically a benign self-limited disease but rarely, it can be associated with serious complications. Although the risk of complications is highest in immunocompromised hosts, newborns and adults, sometimes it occurs in healthy children.
The most common complication of varicella is secondary bacterial infection (skin/soft-tissues, bone and joint infections, bacterial pneumonia, otitis, sepsis) followed by neurological injuries (encephalitis, acute cerebral ataxia)
Case reports. We report the cases of four children admitted to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" with a diagnosis of varicella associated with severe complications: epiglottic abscess, varicellous encephalitis, abdominal wall cellulitis, septic arthritis, severe acute pneumonia. All of these complications occurred in immunocompetent children. Etiological treatment with acyclovir associated or not with antibiotherapy, corticosteroids, surgical treatment, kinetotherapy in cerebral injuries and proper hygiene and skin care were key to a good outcome and successful recovery.
Conclusion. Although varicella is a mild disease, severe complications can occur even in previously healthy children. The evolution of these complications can be fatal, but with an appropriate therapy a good outcome occurred in all the patients reported.

Polyphasic Acute Disseminated Encephalomyelitis in a Child - Case Report

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Background. Acute disseminated encephalomyelitis (ADEM) is an autoimmune demyelinating disease of the central nervous system that can appear after a viral or bacterial infection, post vaccination or even spontaneously. It can have multiple symptoms and insidious onset. The diagnosis confirmation requires MRI scan that shows multifocal demyelinating areas in the subcortical white matter of the brain and spinal cord. We describe a polyphasic evolution of ADEM in a child that had a favorable response to intravenously administered corticosteroid treatment, in high doses, with full recovery after each relapse.
Case report. We present the case of 4 year-old boy, admitted in the Pediatric Intensive Care Unit of the National Institute for Infectious Diseases "Prof. Dr. Matei Balş" with ADEM diagnosis. Positive diagnosis was established on clinical, laboratory criteria and neuroimaging findings.
The case was initially interpreted and treated as viral/aseptic meningitis (with clear CSF) for which he received pathogenic and symptomatic treatment with apparently favorable evolution. Although we tried to discontinue the corticosteroid therapy, this only led to worsening of the general condition and then to status epilepticus. The second MRI brain scan showed evocative lesions, characteristic for the ADEM diagnosis. Etiological diagnosis could not be established even with the best laboratory methods (PCR, serological and immunological tests and different cultures).
Conclusion. ADEM is usually a monophasic disease, but in rare cases it may present as a biphasic or multiphasic one, generating real problems of differential diagnosis with multiple sclerosis. Although the evolution was favorable, the patient required long time multidisciplinary follow-up, given the severity of the case and unknown etiology.

Acute Enterovirus Infections in Children

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Background. Enteroviruses are RNA viruses and are part of the Picornaviridae family; they often present different clinical aspects in children, from asymptomatic forms to severe, potentially life-threatening infections.
Methods. We conducted a retrospective clinical study between August 1, 2011 and July 31, 2012 on all children who were admitted to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" with the diagnosis of "acute enteroviral infection". We monitored the case distribution by age, sex, clinical onset, clinical and evolutionary form of the disease and etiology. The isolation of the enteroviruses was performed from nasopharyngeal secretions, through enzyme-linked immunosorbent assays (ELISA) for enterovirus and coxsackievirus IgM from serum and PLEX-ID from the CSF.
Results. We recorded 272 cases of acute enteroviruses infections. Male patients were predominant (83%), aged between 3 and 7 years old (46%) and originating from urban areas (84%). From the clinical point of view, the most frequent cases were: hand, foot and mouth disease (90%), followed by herpangina (67%) and acute diarrheal disease (45.5%). Severe forms of enteroviral infections were those with pancreatic (6.6%), hepatic (13.2%) and meningeal (3.3%) involvement. No deaths were registered. The etiology determined by the PLEX-ID method in the acute meningitis cases was constituted of 6 cases of echovirus infections, one case of enterovirus 71 infection and 4 cases of coxsackievirus infections.
Conclusion. Because of the large number of registered cases in the past year compared to the previous year, we can consider an epidemic of enteroviral infections during the summer months of 2012, some of which could lead to severe conditions such as pancreatitis, hepatitis and meningoencephalitis.

Acute Meningitis Caused by *Haemophilus influenzae* in Children

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Background. *Haemophilus influenzae* infections can present in various clinical forms such as: otitis, sinusitis, conjunctivitis, epiglottitis, pneumonia, meningitis and sepsis.
This paper's objective is the analysis of the clinical evolution of acute purulent meningitis caused by *Haemophilus influenzae* in children.
Methods. We have conducted a retrospective study over a period of 5 years (2008-2012) on cases of acute purulent meningitis caused by *Haemophilus influenzae*, which were admitted to the Intesive Care Unit of the National Institute of Infectious Diseases "Prof. Dr. Matei Balş". In all patients we monitored: sex, age, background, clinical onset, workup, imaging studies, treatment, evolution and complications.
Results. *Haemophilus influenzae* was identified as the cause for six cases (4.87%) out of all 123 cases of acute purulent meningitis that were admitted in our clinic. Most cases were recorded in the 0-3 years age group (83%), 67% being male patients originating from rural areas (67%). The evolution was unfavorable in two of the cases, the patients requiring orotracheal intubation and mechanical ventilation for a short period of time.
The positive diagnosis was established through usual and specific tests: 2 positive blood cultures, 3 positive pharyngeal cultures, 4 positive latex-agglutination tests and 2 positive CSF cultures. In every case, at least one complication was present: seizures (33%), hemiparesis (17%), psycho-motor retardation (17%), Kawasaki syndrome (17%) and subdural effusions (17%). No deaths were registered.
Conclusion. Although the etiological diagnosis was established in 4.87% of the meningitis cases, acute *Haemophilus influenzae* infection was suspected in other cases previously treated with antibiotics, in which the etiological agent was not identified. Although all patients presented severe forms of infection with accompanying neurological complications, no deaths were registered.

Childhood Bacterial Meningitis Trends in Iaşi from 2007 to 2012

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Background. Despite antibiotic therapy and supportive intensive medical care, acute childhood bacterial meningitis remains a disease with high mortality and morbidity. Rapid recognition of symptoms is crucial for early diagnosis and appropriate antibiotic therapy.

This paper describes the clinical profile and etiology of bacterial meningitis in infants and children admitted to the Infectious Diseases Hospital from Iaşi, over a 5 year period.
Methods. A retrospective study of all the cases of bacterial meningitis with known etiology, in patients less than 18 years old admitted from July 2007 to June 2012. Cerebrospinal fluid was drawn on admission for culture, microscopic examination and latex agglutination test.
Results. Bacterial etiology was found in 57 cases. Median age was 18 months; children under 1 year old accounted for the highest number of cases, which decreased with increasing age. The leading agents were *N meningitidis* 37% (sensitive to penicillin in 76%), *H influenzae* 23% (sensitive to ampicillin in 92%) and *S pneumoniae* 20% (sensitive to penicillin in 73%). Other isolated pathogens were: staphylococci, *P aeruginosa*, group B/group A streptococci. The median duration of illness before admission was 7 days. 61% of patients had seizures, and altered levels of consciousness were observed in 57% of cases. Case fatality was 12% and, of survivors, 21% developed severe neurological sequelae.
Conclusion. *N meningitidis*, *H influenzae* and *S pneumoniae* were the most common etiological agents of bacterial meningitis in children and the pathogens were susceptible to the currently recommended antimicrobial drugs.

Pansinusitis Complicated with Acute Brain Abscess Caused by *Propionibacterium acnes*

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Background. *Propionibacterium acnes* species are non-sporulating, Gram-positive anaerobic bacilli that are considered commensal bacteria of the skin. This bacterium is usually the etiologic agent of uncomplicated folliculitis. In rare cases it can be the etiologic agent of several severe conditions, such as endocarditis, brain abscess, subdural empyema and peritonitis.
Case report. We present the clinical case of a 12 year-old girl, admitted in the Pediatric Intensive Care Unit of the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" in Bucharest, with the following diagnosis: acute pansinusitis complicated with brain abscess and subdural empyema, right hemiparesis and convulsive status. Positive diagnosis was established on clinical criteria, laboratory testing and brain MRI.
Results. Etiology was determined using the PLEX-ID method, performed in blood samples, which identified *Propionibacterium acnes* bacillus as the responsible agent for the patient's infection. The general condition of the patient was critical, requiring orotracheal intubation and mechanical ventilation for convulsive status and subsequent brain surgery, alongside sustained antibiotic treatment. The evolution was favorable as the patient presented resolution of motor deficits and no new seizures.
The particularity of the case is that although the patient initially presented typical symptoms of acute sinusitis and was treated with clarithromycin for 14 days, she developed a brain abscess complicated by subdural empyema.
Conclusion. Despite the fact that the bacillus *Propionibacterium acnes* is a saprophyte germ, in the case of this apparently immunocompetent patient, it represented the etiology for a severe potentially lethal disease infection. PLEX-ID method is a new, rapid, specific and sensitive non-diagnostic method which proved to be highly useful in determining the correct therapeutic attitude.

2011-2012 Measles Epidemics – Particularities in Children Admitted to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş"

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Background. Even though vaccination against measles in Romania has been included on the mandatory immunization schedule of the Health Ministry for many years, starting with the end of summer 2011, we recorded an important number of confirmed measles cases, large enough to be considered an epidemic.
The increasing number of cases in Romania came shortly after a few clusters of measles were recorded in western EU countries.
We aim to draw the attention of the medical community and the general population for the risk of measles spreading among unvaccinated children.
Methods. We present the results of a retrospective study which included the patients admitted in the pediatric unit of the National Institute of Infectious Diseases "Prof. Dr. Matei Balş", from 01.09.2011 to 01.09.2012. Our patients represent about 20% of the measles cases reported nationally.
Results. In our group of patients, 25% were infants and over 40% were children between 1 and 4 years old.
The patients originated in some communities with gipsy population majority and most of them refused prior vaccination. From the same communities we recorded a few cases with coinfection of measles and viral A hepatitis.
Almost all the cases presented complications, ranging from the most common (pneumonia, stomatitis, diarrhea, dehydration syndrome) to life-threatening (acute respiratory failure, encephalitis, severe immunodeficiency), but no fatal cases were recorded.
Conclusion. The reemergence of a virus that's supposed to be eradicated, considering that all EU countries have measles vaccination on their national immunization schedule. The large number of complications which transformed measles from a mild disease that required home isolation to a severe disease that required hospitalization.

Clinical Polymorphism of Acute *Mycoplasma pneumoniae* Infection in Children

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Background. *Mycoplasma pneumoniae* is an atypical bacteria and a causative agent for respiratory diseases, from simple forms to severe acute pneumonia with respiratory failure. Sometimes it may produce nonpulmonary diseases such as encephalitis, meningoencephalitis, polyradiculoneuritis, myocarditis, hemolytic anemia, reactive arthritis and erythema multiforme (Stevens Johnson syndrome).
Case reports. We report 5 cases of children admitted to the National Institute of Infectious Diseases "Prof. Dr. Matei Balş" with a diagnosis of acute infection with *Mycoplasma pneumoniae* and

different clinical features. Positive diagnosis was based on clinical sign and symptoms, laboratory and imaging findings.
There were two cases of Stevens Johnson syndrome, one case of reactive arthritis and intra-infectious purpura, one case of acute meningitis and two cases of acute pneumonia.
Conclusion. Early diagnosis of *Mycoplasma pneumoniae* infections in children can be difficult due to clinical polymorphism. All cases presented had a favorable outcome under appropriate treatment.

Hemolytic Uremic Syndrome - Severe Complication of Acute Gastroenteritis in Children

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Background. Hemolytic uremic syndrome (HUS) is primarily a disease of infancy and early childhood and is characterized by the triad of microangiopathic hemolytic anemia, thrombocytopenia, and acute renal failure. HUS is the most common cause of acute renal failure in children. This disease is often preceded by an episode of acute gastroenterocolitis caused by an enterohemorrhagic strain of *Escherichia coli* (O157:H7), but the syndrome has been rarely associated with various nonenteric infections, viruses, drugs, malignancies, antiphospholipid syndrome. We describe HUS as a severe complication of acute gastroenterocolitis in children.
Case reports. We report the cases of two children admitted to the National Institute of Infectious Disease "Prof. Dr. Matei Balş" with a diagnosis of acute gastroenterocolitis.
The children developed HUS four days after diarrhea onset; both patients received antibiotics for gastroenterocolitis. The diagnosis was confirmed by bloody diarrhea, oliguria, hemolytic anemia, thrombocytopenia, acute renal failure. Stool cultures couldn't isolate the etiological agent; the children had received antibiotics prior to admission in our hospital.
The evolution was favorable for the both children; one of them required hemodialysis for 4 days until regaining renal function.
Conclusion. HUS is a severe, acute and dramatic disease affecting previously healthy children; it is frequently due to Shiga toxin-producing *E coli* enteric infections.
A more careful medical evaluation of the hematological and renal manifestation, and appropriate treatment, give the best chance for patient recovery.

Off-label Treatment with Nucleoside Inhibitors of Severe Acute Hepatitis B in Children

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Background. The most frequent type of transmission for hepatitis B virus in children and infants is vertical transmission, especially from HBeAg positive mothers. In the absence of immunoprophylaxis, transmission occurs in almost 70-90% of cases.
Methods. Between July 2008 and July 2011 we monitored 7 children with severe acute hepatitis B, who were admitted to our pediatric intensive care unit.
Diagnostic criteria: acute encephalopathy, bilirubin >10 mg/dL and INR >1.6. All children were HBsAg- and HBeAg-positive and had a viral load (HBV-DNA) >1 million copies/mL. In the third day of evolution, we decided to institute treatment with nucleoside analogues. The informed consent was obtained from the parents. Five children received 3 mg/kg/day of lamivudine and 2 children received 0.015 mg/kg/day of entecavir.
Results. The outcome was as follows: 2 infants died and the other 5 survived. Treatment was administered for 3 months. The clearance of HBsAg was obtained at 3 months in 2 children and at 6 months in 3 children. Clearance of HBeAg took place between the first and the second month. HBV-DNA was undetectable at 4 weeks in 2 children and at 3 months in the other 3 children.
Conclusion. The small number of cases is due to immunoprophylaxis with immunoglobulins and anti-hepatitis B vaccine administered at birth for newborns with positive HBsAg and HBeAg mothers. We note that the mothers had not received specific treatment and their children had not received immunoprophylaxis with immunoglobulins or vaccine at birth; the older children were incompletely vaccinated. The success of the treatment with nucleoside analogues, paired with viral clearance in 3 months, gave us hope for a better therapy and implicitly a better outcome for children with severe acute hepatitis B.

Infectious Complications in Chronic Granulomatous Disease in Children - Case Report

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Background. Chronic granulomatous disease (CGD) is a primary immunodeficiency of phagocytes which leads to inefficient immune defense. The patients afflicted with this condition are in danger for infections with *Staphylococcus aureus*, Gram-negative bacilli, *Mycobacteria* and fungi.
Case report. We present the case of a 6 year-old boy who was admitted to our clinic with fever, chills, headache, abdominal pain in the right upper quadrant, vomiting and lethargy.
Clinical evidence at the last admission showed an important hepatomegaly, with the presence of 2 tumoral masses, confirmed by abdominal ultrasonography; one mass located on the right lobe and the other on the surface of the left lobe with a fluctuant aspect. The child was diagnosed with CGD at the age of 1, when he was hospitalized with tuberculous (TB) meningitis. He received 1 year of anti-TB treatment and a ventriculoperitoneal shunt was placed for an important secondary hydrocephaly. After 2 years of good evolution, the child began to present frequent staphylococcal skin abscesses which required surgical and antibiotic treatment.
The abdominal MRI described 2 abscesses in segments V and VI of the liver. The abscesses were evacuated by CT guided percutaneous drainage. Bacterial cultures were positive for methicillin-resistant *Staphylococcus aureus*. We decided to treat with vancomycin + linezolid, to which voriconazole was added for a suspected but unproven lung aspergillosis. Treatment was continued for 6 weeks, with the abscesses' resolution, and the disappearance of the radiological lung images.
Conclusion. This is a case report of a patient with CGD with frequent staphylococcal infections, extensive antibiotic treatment and a reserved prognosis. When the diagnosis of CGD is established in children, we must be aware of the risk for severe, potentially life-threatening bacterial and fungal infections. The prophylaxis of infections is mandatory in CGD.

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