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Str. Croitorilor no. 19-21, 400162 Cluj-Napoca, Romania  
e-mail: editorjgld@gmail.com, ddumitrascu@umfcluj.ro  
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# **Journal of Gastrointestinal and Liver Diseases**

Volume 33, 2024

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Romanian Society of NeuroGastroenterology (SRNG)

## **The Romanian Biennial Meeting of Neurogastroenterology**

Abstract Book

***November 28th – 30th, 2024***

***Iasi, România***

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## Chapter 1. Oral Presentations

### OP1. INTERACTION OF GASTROESOPHAGEAL REFLUX DISEASE AND IRRITABLE BOWEL SYNDROME IN PATIENTS WITH OVERLAPPING GASTROINTESTINAL DISORDERS

**Carmen Anton**<sup>1,2</sup>, A. Cemîrtan<sup>2</sup>, Iulia Tocarciuc<sup>2</sup>, Mihaela Dimache<sup>1,2</sup>, Oana Bărboi<sup>1,2</sup>, V. Drug<sup>1,2</sup>

<sup>1</sup>University of Medicine and Pharmacy "Grigore T. Popa", Iasi, Romania

<sup>2</sup>Institute of Gastroenterology and Hepatology, "St.Spiridon" Hospital Iasi, Romania

**Introduction.** The Gastroesophageal reflux disease-Irritable Bowel Syndrome (GERD-IBS) overlap ranges from 3-79% in questionnaire-based studies and from 10-74% when GERD has been diagnosed endoscopically. The prevalence of functional dyspepsia (FD) is 12-15% and an overlap with GERD has been reported frequently, as has potential overlap between functional heartburn (FH) and IBS using a 24-h pH-metry or impedance-pH evaluation.

**Material and Method.** Multichannel intraluminal impedance and pH monitoring (MII-pH) is the gold standard to identify GERD patients, and distal esophageal acid exposure time (AET), the number of reflux episodes and the association between symptoms and refluxes can also be evaluated. Reflux esophagitis is endoscopically classified according to the Los Angeles criteria (from A to D denoting increasing severity and extension of inflammation).

**Results.** 24-h MII-pH has shown that weak acidic reflux induces typical reflux symptoms, which do not respond to PPIs and to be diagnosed with FH, patients should display a normal upper endoscopy, a normal AET in the distal esophagus and a negative symptom association with acid and non-acid reflux by means of MII-pH. Baseline impedance values and post-reflux swallowing-induced peristaltic wave index distinguish better patients with GERD from those without. In studies where heartburn was investigated through only a symptom questionnaire, it is a remarkable variability regarding the prevalence of GERD in patients with a diagnosis of IBS.

**Conclusions.** Functional esophageal disorders overlap more frequently with IBS or FD compared with GERD. A deeper comprehension of the pathophysiology should improve therapeutic options in gastrointestinal functional disorders (FGIDs). The current evidence regarding the possible concomitance of GERD with IBS and FD in the same

patients is useful in GERD treatments impact on the quality of life of these patients. The overlap is between GERD, FH, and FGIDs, such as IBS and FD.

**Key words.** Gastroesophageal reflux disease, Irritable Bowel Syndrome, Overlap

### OP2. THE UTILITY OF ESOPHAGEAL HIGH-RESOLUTION MANOMETRY IN A NEUROGASTROENTEROLOGY LAB – THE EXPERIENCE OF A TERTIARY CENTER FROM NORTH-EASTERN ROMANIA

**Oana-Bogdana Bărboi**, Oana-Cristina Petrea, Diana-Elena Floria, Anca Trifan, VL Drug

<sup>1</sup>University of Medicine and Pharmacy "Grigore T. Popa", Iasi, Romania

<sup>2</sup>"Saint Spiridon" Hospital, Institute of Gastroenterology and Hepatology Iasi, Romania

**Introduction.** A gastrointestinal motility department is essential for performing the main diagnostic and therapeutic motility procedures. High-resolution manometry (HRM) is one of the most important tools in the field of Neurogastroenterology, providing measurements of esophageal function and guides the treatment. The aim of this study was to assess the HRM particularities of diagnosis, clinical features and therapeutic management in patients evaluated for esophageal motor dysfunction.

**Material and methods.** The study included patients suspected of esophageal motility disorders referred to our center from North-Eastern Romania, between July 2022 and September 2024. All patients were investigated by upper digestive endoscopy and barium esophagogram prior to HRM. Patients diagnosed with eosinophilic esophagitis were excluded from the study. An ISOLAB HR® system from Standard Instruments, with a 36-pressure channels solid-state catheter was used. The HRM diagnosis of esophageal motor diseases was established based on Chicago 4 protocol and classification.

**Results.** Out of the 120 patients, 56 (46.66%) were female and 64 (53.33%) male, with a mean age of 63.2±10.8. Regarding clinical features, 85.5% of patients presented with dysphagia. Significant weight loss was identified in 12 patients (10%), while 7 patients (14.6%) reported non-cardiac chest pain. Achalasia was found in 55 patients (45.83%), with type I in 25 patients (45.45%), type II in 23 patients (41.81%) and type III in 7 patients

(12.72%). Distal esophageal spasm was found in 15 patients (23.07%), hypercontractile esophagus in 4 patients (6.15%), esophagogastric junction outflow obstruction (EGJOO) in 4 patients (6.15%), ineffective esophageal motility in 29 patients (44.61%), absent contractility in 11 patients (16.92%) and dysphagia lusoria was identified in 2 patients (3.07%). Endoscopic dilation was performed in 40 patients (33.3%), endoscopic myotomy in one patient (0.83%), while 14 patients (11.66%) were referred to surgery.

Conclusions. Esophageal HRM represents an important tool for assessing esophageal motor dysfunction and is a mandatory procedure for a gastroenterology department.

Key-words: high-resolution manometry, esophageal motility disorders, achalasia, dysphagia

### **OP3. IRRITABLE BOWEL SYNDROME COMORBID WITH POST-COVID SYNDROME IN THE SYNDemic ERA**

**Alexandru Babin**

*USMF N. Testemițanu, Chișinău, Moldova*

Introduction: The immense stress on patients with Irritable Bowel Syndrome (IBS), after "enduring" COVID-19, has led to changes in the symptoms of diseases caused by the Brain-Gut axis, including comorbidities, by changing the composition of the intestinal microbiota in recent years, affecting the integrity of the intestinal mucosa and inflammation of low intensity (low inflammation).

Objective: The aim of this study was to reflect the symptoms of IBS in patients with the post-COVID-19 syndrome in terms of comorbidities (obesity, MAFLD – Metabolic dysfunction-Associated Fatty Liver Disease, CaReMe – Cardio-Reno-Metabolic syndrome) – syndemia.

Material and Methods: The current study included 35 patients with IBS + post-COVID syndrome (NICE) + obesity (BMI = 30-34.9 kg/[m]<sup>2</sup>). The mean age was 41 ± 3.2 years; the female/male ratio was 3:2. All patients underwent fibrocolonoscopy (FCS) with biopsy, Stool Ag.-test Hp, CDI (Cl. difficile infection), assessment of calprotectin (quantitative/qualitative), onco-markers (CEA, CA-19.9, CA-153, CA-125), lipidogram, glycemic control, eRFG (CKD-EPI).

Results: The division according to ROMA IV showed predominantly IBS with diarrhea (13 pts. - 37%) and mixed IBS (9 pts. - 25%), of which 18 pts. (51%) also demonstrated the presence of MAFLD. According to s-m cardiometabolic (CM) criteria, eRFG examination also reflected BCR gr. G3a-b (K/DIGO) – syndemia, which is explained by the disruption of mucosal integrity (SCPE – Increased Epithelial Permeability Syndrome). Considering that around 80% blood in the liver is blood from the

intestine, so toxicosis evolved into low-intensity inflammation → MAFLD → CaReMe with eRFG in the range of 45-59 ml/min/1.73m<sup>2</sup>.

Conclusions:

1. Comorbidities of IBS with unspecified post-COVID-19 syndrome (+MAFLD→CaReMe) is an overlap syndrome that demonstrates syndemia and worsens the negative impact on IBS symptoms.

2. The management of these patients (with the overlap syndrome - syndemia) requires a comprehensive, multidisciplinary approach by the family doctor, but the treatment also involves the inclusion of synbiotics, Rifaximin, GLP-1 RA and i-SGLT-2.

Keywords: IBS, post-COVID-19, obesity, metabolic syndrome, *syndemia*, interrelations.

### **OP4. THE MANAGEMENT OF NON-ACHALASIA ESOPHAGEAL MOTOR DISORDERS**

**Ion Bancila**

*Fundeni Clinical Institute, Bucuresti, Romania*

High resolution esophageal manometry is currently the gold standard for evaluation of patients which present with obstructive esophageal symptoms and in which benign (peptic strictures, hiatal hernia, Schatzki's ring, eosinophilic esophagitis) or malignant esophageal strictures have been ruled out by endoscopy with biopsy. Functional lumen imaging probe (FLIP) is a new tool for esophageal physiologic testing used in instances of an inconclusive diagnosis of achalasia or esophagogastric junction outflow obstruction (EGJOO). FLIP can also be used in tailoring the extent of laparoscopic Heller myotomy or peroral endoscopic myotomy.

In the Chicago 4 classification the diagnosis of EGJOO is significantly more stringent than before, needing supportive evidence from other tests and also suggestive clinical manifestations. The first line of therapy consists of a conservative approach, with botulinum toxin injection or standard endoscopic dilation. More aggressive approaches such as pneumatic dilation, surgical myotomy or peroral endoscopic myotomy (POEM) are recommended only in very symptomatic patients, for controlled studies for these treatments in EGJOO are lacking.

Spastic esophageal disorders (distal esophageal spasm and hypercontractile esophagus) may be primary motor dysfunctions, or secondary to chronic opioid therapy, or a reactive clearance response in gastro-esophageal reflux disease. Therefore, the management of these disorders entails the performance of ambulatory reflux testing. If reflux testing is negative, the first line of therapy consists of pharmacotherapy (smooth muscle relaxants; neuromodulators if overlapping with visceral hypersensitivity is suspected) or botulinum toxin injection. If this fails, surgical

myotomy or POEM are recommended, although robust well controlled studies are lacking.

Ineffective esophageal motility (IEM) and absent contractility are hypomotility disorders of the esophagus which are difficult to manage due to the lack of clear association with symptoms. Pharmacotherapy is largely ineffective and lifestyle and dietary modifications such as chewing carefully and chasing solid boluses with water are paramount. Also very important is patient reassurance, with emphasis on the fact that in the majority of patients IEM does not progress over time and quality of life is not impacted.

## **OP5. PERSONALITY CHARACTERISTICS OF THE PATIENT WITH PEPTIC ULCER**

**Rodica Bugai<sup>1</sup>**, Maria Feghiu<sup>1</sup>

<sup>1</sup>SUMPh "Nicolae Testemițanu" Chișinău, Republic of Moldova

Introduction: Peptic ulcer (PU) continues to be a widely discussed disease in specialized literature and medical practice due to its etiopathogenic complexity, affecting young people and severe complications. Research shows that psychological factors can contribute to the development of the disease as well as to the patient's perception of clinical symptoms and their reporting, the patient's attitude towards the disease, treatment compliance and treatment outcome.

Material and methods: The study included the experimental group (EG): 19 patients with peptic ulcer (8-with gastric ulcer, 11- with duodenal ulcer), aged 26-47 years, mean age-36±0.94 years, and control group (CG): 25 practically healthy people, aged 21-36 years, average age-31±0.87 years. Male/female ratio: LE- 13/6, LC- 16/9. Both groups were given the MMPI Test short form (MINI-MULT), the participants being informed about the confidentiality of the obtained data and their strict use for experimental study.

Results: The study demonstrated the presence of PU in 68.42% cases of young patients (35-44 years old), with high school (42.11%) and higher education (33.33%), trained in mental activities, accompanied by stress, psycho-emotional overload, physical and mental overwork; celibates - 57.89%; with late referral to the doctor-63.16%. The results of the MINI-MULT MMPI test demonstrate major, statistically significant differences ( $p < 0.05$ ) between EG and CG, on scales 1 (Hypochondria), 2 (Depression), 3 (Hysteria), 7 (Psychasthenia). Patients with PU are mostly more depressed, anxious-hypochondriac than CG, which also associates other risk factors: eating disorders (100%), stress (89.47%), smoking (73.69%), alcohol (42.11%) etc.

Conclusions: People with certain personality traits have a higher risk of developing PU through the involvement of some neuroendocrine mechanisms of physiological and social maladaptation. In order to achieve long-lasting therapeutic results in patients with PU, it is necessary to include in the treatment psychological programs for recovery and effective adaptation to the disease.

Key words: peptic ulcer, personality traits

## **OP6. THERAPEUTIC APPROACH IN NEUROENDOCRINE AND NEUROENDOCRINE-LIKE GASTROINTESTINAL TUMORS: 2 CLINICAL CASES**

**Catalina Roxana Chiriac<sup>1</sup>**, Ana-Maria Trofin<sup>1</sup>, Ramona Cadar<sup>1</sup>, Alexandru Nastase<sup>1</sup>, Mihai Zabara<sup>1</sup>, Felicia Crumpei<sup>1</sup>, Eugen Tarcoveanu<sup>1</sup>, Oana Lovin<sup>1</sup>, Corina Lupascu-Ursulescu<sup>1</sup>, Cristian Lupascu<sup>1</sup>

<sup>1</sup>Spitalul "Sf. Spiridon", Iasi, Romania

Gastrointestinal neuroendocrine tumors are rare, slow-growing tumors with distinct characteristics that have increased in incidence over the past decades. The treatment includes surgery, radiotherapy, chemotherapy and hormone therapy addressed both to the primary tumor and to distant metastases, for curative or palliative purposes.

We present two cases of neuroendocrine, respectively neuroendocrine-like tumors that required complex multidisciplinary management. Case 1. 70-year-old patient diagnosed with pancreatic neuroendocrine tumor with metastatic dissemination in the context of multiple endocrine neoplasia MEN1. The patient presented with the onset of symptoms 13 years ago, undergoing quasi-total isthmus-corporeal-caudal pancreatectomy with preservation of the spleen, anterior antrum-pylorus-duodenectomy with antrum-duodeno-anastomosis and ablation of the accessory spleen. The patient presents to the gastroenterology clinic 18 months after the ERCP insertion of a metallic biliary stent, with hepatic cytolysis and cholestasis. Paraclinical examination highlights the gallbladder completely occupied by an organized mass/sludge, the stent is functional in a normal position and an additional metastasis in the segment VIII of liver are found. The bile duct is cannulated. The cholangiogram highlights the dilated main bile duct, the metallic biliary stent in the correct position with minimal extrinsic pressure. After performing multiple passages with the balloon extractive catheters with the elimination of sludge food residues, the evolution is favorable, the patient being oriented towards the endocrinological and oncological dispensary.

Case 2 Patient aged 65 years with multiple cardiovascular and nephrological and pulmonary comorbidities, with acute symptomatic onset through a loose of consciousness episode, sweating

and uncontrolled movements, clinical and paraclinical data being suggestive of insulinoma. Distal splenopancreatectomy was performed. The histopathological and immunohistochemical examination corresponds to a pancreatic cystadenoma.

Conclusions: Neuroendocrine and endocrine-like tumors of the digestive tract are heterogeneous entities with variability in diagnosis and management. The presented cases highlight the complex management with evolution over a long period of time in the context of a MEN1 syndrome and respectively the difficult differential diagnosis. The multidisciplinary approach is essential, and the reporting of these rare clinical cases could lead to the improvement of diagnostic and treatment guidelines in the context of the limited volume of data for rare tumors.

### **OP7. FROM NEUROENDOCRINE MODULATION OF FUNCTIONAL GASTROINTESTINAL DISEASE TO NEUROENDOCRINE TUMORS (NET) OF THE GASTROENTEROPANCREATIC (GEP) ORIGIN**

**Mircea Diculescu**, Tudor Stroie, Doina Istratescu, Catalina Poiana, Rucsandra Ilinca Diculescu

<sup>1</sup>Faculty of Medicine, Ovidius University of Constanta, Constanta, Romania, <sup>2</sup>Gastroenterology Department of Constanta County Clinical Emergency Hospital, Constanta, Romania

Introduction: Colorectal cancer (CRC) represents Introduction: The incidence and prevalence of gastroenteropancreatic neuroendocrine tumors (GEP NETs) have increased over the last few decades. Although the exact mechanism of tumorigenesis is still unknown, diagnostic accuracy has improved over the years.

Presentation: Dysregulation of the neuroendocrine system in the gastrointestinal tract is one of the main mechanisms underlying Functional Gastrointestinal Disorders (FGDs). The Rome IV classification aims to make a more accurate distinction between these disorders to improve symptom management. Unfortunately, many GEP NETs may present symptoms that mimic FGDs. Some of these tumors, particularly those that grow slowly, may be diagnosed late due to their small size or location in the small intestine or pancreas. Often, tumors that do not exhibit clear carcinoid syndrome are only diagnosed once they have metastasized to the liver.

On the other hand, the neuroendocrine diffuse systems of the gastrointestinal tract and pancreas exist in a complex and fragile equilibrium that can be easily disrupted by various exogenous factors. Additionally, medications can influence the precise interrelationships between different entero-hormones. For example, the relationship between

gastrinomas and the surrounding gastritis illustrates this point. Furthermore, excessive use of proton pump inhibitors (PPIs) may lead to dysregulation of the enteroendocrine chain. Another example is the consistent increase in serum chromogranin levels observed with the use of H2 blockers or PPIs.

Conclusion: The significant increase in the incidence and prevalence of GEP NETs may be attributed not only to advances in diagnostic procedures but also to mechanisms that may be common to or misdiagnosed as FGDs.

### **OP8. ALTERATIONS IN MICROBIOTA AND DIGESTIVE METABOLITES IN FUNCTIONAL DYSPESIA**

**Radu-Alexandru Farcas**<sup>1</sup>, Grad Simona<sup>1</sup>, Dan-Lucian Dumitraşcu<sup>1</sup>

<sup>1</sup>2nd Department of Internal Medicine, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca

Introduction: Functional dyspepsia (FD) is a disorder of gut-brain interaction that currently has currently various pathological mechanisms described. Emerging evidence suggests that alterations in the gut microbiota may play a role in the pathogenesis of FD, with specific microbial changes potentially contributing to symptoms. The aim of this study was to systematically review the existing literature on microbiota alterations in patients with functional dyspepsia.

A comprehensive search was conducted using PubMed, EMBASE, and Scopus to identify relevant studies published on microbiota changes in FD. Microbial changes were evaluated, focusing on increases or decreases in specific bacterial populations.

Results: The review identified notable alterations in the gut microbiota of patients with functional dyspepsia. Across multiple studies, Streptococcus was consistently found to be elevated, along with increases in Firmicutes and Bacteroides/Proteobacteria in certain populations. In contrast, significant decreases were observed in Prevotella, Veillonella, Leptotrichia, and Actinomyces, as well as reductions in Neisseria and Porphyromonas.

Conclusions: The present study indicates significant alterations in the gut microbiota in patients with functional dyspepsia. Common findings include an increase in Streptococcus and Firmicutes, along with a decrease in beneficial microbes such as Prevotella and Neisseria. These microbial shifts may contribute to the pathophysiology of FD and could offer new avenues for therapeutic interventions targeting the gut microbiota in FD patients.

### **OP9. POLYMORPHISMS AND PATHWAYS IN THE PATHOGENESIS OF IRRITABLE BOWEL SYNDROME**

## AND INFLAMMATORY BOWEL DISEASES: DIFFERENCES AND SIMILARITIES

**Andreea Florea<sup>1</sup>**, Lavinia Caba<sup>1</sup>, Vasile Drug<sup>1</sup>, Catalina Mihai<sup>1</sup>, Eusebiu Vlad Gorduza<sup>1</sup>

<sup>1</sup>"Grigore T. Popa" University of Medicine and Pharmacy, Iasi, Romania

**Introduction:** Inflammatory bowel diseases (IBD) and irritable bowel syndrome (IBS) are two distinct pathologies encountered all over the world. IBD encompass two main diseases, ulcerative colitis and Crohn disease, and are considered to be "organic" disorders, while IBS is considered to be a "functional" one. Both IBD and IBS involve complex interactions between gut, immune system and nervous system, but present different pathophysiological mechanisms.

**Materials and Methods:** We conducted a comprehensive literature search throughout multiple scientific databases, in order to find the relevant articles which, include the most important genetic predisposition genes and polymorphisms related to both IBD and IBS, and then we structured them by the main pathway involved. **Results:** In IBD, the genes (IL23R, CARD9) and pathways involved, primarily focus on inflammation and immune system dysregulation. In IBS, the main genes (SLC6A4, DOCK9) control pathways related to serotonin metabolism, visceral sensitivity and gut motility.

**Conclusions:** Genetic polymorphisms and pathophysiological pathways are crucial for understanding these diseases. While for IBD the genetic polymorphisms are implied in immune system and inflammation, in IBS these genetic polymorphisms are related to brain-gut axis dysregulation and gut motility.

**Keywords:** irritable bowel syndrome, inflammatory bowel diseases, pathways.

## OP10. ADVANCES AND CHALLENGES OF BIOMARKER IDENTIFICATION IN IRRITABLE BOWEL SYNDROME

**Abdulrahman Ismaiel<sup>1</sup>**, Stefan-Lucian Popa<sup>1</sup>, Dan L. Dumitrascu<sup>1</sup>

<sup>1</sup>2nd Department of Internal Medicine, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

**Introduction:** Irritable bowel syndrome (IBS) is a prevalent functional gastrointestinal disorder affecting 10-15% of the global population, characterized by symptoms such as abdominal pain, bloating, and altered bowel habits. Given its multifactorial etiology, encompassing genetic, environmental, and psychosocial factors, the identification and utilization of biomarkers are

crucial for differentiating IBS from other gastrointestinal disorders and enhancing patient management.

**Methods:** A literature review was conducted to explore the current landscape of biomarkers associated with IBS. The review focused on various biomarker categories, including blood and fecal biomarkers, gut microbiota, and microRNAs (miRNAs), emphasizing their diagnostic utility and clinical implications.

**Results:** Blood biomarkers such as serum-based panels have shown promise in differentiating IBS from inflammatory bowel disease (IBD) and celiac disease, with immune activation markers like IL-1 $\beta$ , IL-6, and TNF- $\alpha$  correlating with symptom severity in IBS patients. Fecal biomarkers, particularly fecal calprotectin (FC), provide a non-invasive means to differentiate IBS from IBD, as elevated FC levels typically indicate intestinal inflammation.

Additionally, fecal short-chain fatty acids (SCFAs) and volatile organic metabolites (VOCs) have been associated with the pathophysiology of IBS.

Dysbiosis of gut microbiota is frequently observed in IBS patients, and specific miRNAs, such as miRNA-24, may influence symptomatology by regulating serotonin transport. These biomarkers underscore the complexity of IBS and its underlying mechanisms.

**Conclusions:** In summary, developing biomarkers for IBS is challenging due to the disorder's diverse and overlapping subtypes. Identifying subtype-specific biomarkers is essential for targeted treatment strategies. While fecal calprotectin and intestinal permeability markers show promise, existing biomarkers, along with symptom-based criteria, often provide modest predictive value. Future research should prioritize the validation of biomarkers across varied patient cohorts to enhance diagnostic accuracy and improve patient outcomes.

**Keywords:** Biomarkers; Non-invasive diagnosis; Irritable bowel syndrome; Disorder of gut-brain interaction (DGBI); Symptoms.

## OP11. CLINICAL AND ENDOSCOPIC FEATURES OF GASTROESOPHAGEAL REFLUX DISEASE IN POSTMENOPAUSAL WOMEN

**Elena Gologan<sup>1</sup>**, Oana Timofte<sup>1</sup>, Georgiana Gilcă Blanariu<sup>1</sup>, A Olteanu<sup>1</sup>, Carmen Anton<sup>1</sup>, Mihaela Dimache<sup>1</sup>, AN Gologan<sup>1</sup>, Mara Krysta Grumeza<sup>1</sup>, DȘ Gologan<sup>1</sup>, Mara Ilinca Timofte<sup>1</sup>, Vasile Drug<sup>1</sup>

<sup>1</sup>University of Medicine and Pharmacy "Grigore T Popa", Iasi, Romania

**Introduction.** Gastroesophageal reflux disease (GERD) is common in postmenopausal women, multiple factors being involved in its high incidence in this category of patients.

**Method.** In a group of 36 postmenopausal GERD patients, who underwent an upper digestive

endoscopy (UDE), we analyzed (to identify elements that could generate or maintain GERD): the duration in years since the onset of menopause and the body mass index (BMI) in relation to endoscopic findings. The indication for UDE was the presence of alarm symptoms (dysphagia, weight loss, anemia) or lack of response to treatment with proton pump inhibitors.

Results: The duration since the onset of menopause was 1-44 years (average 15.3) and BMI was 19.2-57.05 (average 33.98). UDE revealed a Hill III or IV hiatal incontinence in 22 cases (mean 3.3), in all cases overweight or obese patients and in 20 cases the patients had more than 10 years since the onset of menopause. Esophagitis was found in 27 cases (of which 21 associated with hiatal hernia, 23 being overweight or obese and 24 at more than 10 years after the onset of menopause), peptic esophageal stenosis in one patient, esophageal diverticulum in one patient, eosinophilic esophagitis in one patient. The size of the hiatal hernia was 1-8 cm (mean 3.2). In 2 cases with hiatal hernia were also found Cameron ulcers, one of them with bleeding.

Conclusion. GERD frequently affects postmenopausal women through complex mechanisms, but many cases have an organic substrate - abnormalities of the esophageal-gastric junction and frequently associate esophagitis. Most of the patients were overweight or obese. Not infrequently, other lesions that cause alarm symptoms must be ruled out endoscopically. Keywords: gastroesophageal reflux disease, postmenopausal women, endoscopy

## **OP12. QUALITY OF LIFE IN PATIENTS WITH GASTROESOPHAGEAL REFLUX DISEASE AND NEUROLOGICAL DISORDERS**

**E. Munteanu<sup>1</sup>**, M. Stoica<sup>1</sup>, A. Munteanu<sup>1</sup>, O. Sârbu<sup>1</sup>, V. Istrati<sup>1</sup>

<sup>1</sup>*Department of Internal Medicine-Semiology, Nicolae Testemițanu State University of Medicine and Pharmacy, Chisinau, Republic of Moldova*

Introduction. Globally, gastroesophageal reflux disease (GERD) affects approximately 1.03 billion people. In Europe, the incidence ranges between 7.7% and 36%. In the Republic of Moldova, the prevalence of the disease is 17.4% of the population, and 35% of the evaluated epidemiological studies have reported an association between GERD and neurological disorders. The aim of this study was to evaluate the quality of life in patients with GERD and neurological disorders. Material and Methods. The association between GERD and neurological

disorders was explored through a review of the specialized literature. Data were collected from 150 patients undergoing treatment in the Gastroenterology department, of which 100 patients showed signs of the disease (group I, study) and 50 patients were healthy (group II, control). For quality of life assessment, patients completed the SF-36 questionnaire. All dimensions of the questionnaire were correlated with GERD, depression, and anxiety. Results. Among people with GERD, 18% were diagnosed with depression, 16% with anxiety, and 12% with both conditions. Among these individuals, 37% experienced role limitations due to pain, 29% reported a lower quality of life due to physical health impairment, and 45% cited emotional problems as contributing factors. Additionally, 32% reported early fatigue, and 16% experienced reduced social functioning. Conclusions. We observed a negative correlation between anxiety, depression, and GERD, with a significant impact on the quality of life. Every aspect of life investigated showed more negative effects in people with GERD and neurological disorders compared to healthy individuals.

Key words: quality of life, GERD, neurological disorders.

## **OP13. AN UNUSUAL CASE OF ADYNAMIC ILEUS**

**Oana-Maria Muru<sup>1</sup>**, Corina-Silvia Pop<sup>1</sup>, Sorina Laura Diaconu<sup>1</sup>

<sup>1</sup>*Gastroenterology II Department, University Emergency Hospital, Bucharest, Romania*

Introduction: Adynamic ileus is the condition where the motor activity of the bowel is impaired, caused by a series of complex mechanical and functional diseases. Early diagnosis and correct management are essential for a better prognosis of the patients. Material and method: A 50-years old patient was transferred to the Gastroenterology Department for further examination, after she was investigated in the Neurology Department for postural instability and paresthesia. Moreover, she had persistent pseudo-obstruction episodes (with abdominal pain, vomiting, excessive bloating), as well as watery diarrhea and important weight loss, which started two years ago.

Results: As a central neurological disease was excluded, abdominal computed tomography scan was done and it had shown important gastric and small bowel dilatation. On the other hand, endoscopy, colonoscopy with multiple biopsies, stool tests, autoimmune disease antibodies, thyroid disease, carcinoid syndrome and porphyria screening had negative results. Eventually, an

exploratory laparotomy with jejunostomy was performed and the biopsy of the intestinal wall successfully revealed the destruction of the myenteric plexus.

Conclusion: Although rare, enteric neuronal degeneration represents an important cause of morbidity and mortality in patients with impaired motility and the biopsy of the intestinal wall is the key to the diagnosis.

Keywords : pseudo-obstruction, motility, enteric neuronal degeneration

## **OP14. LIMITS OF HERBAL THERAPY IN BRAIN-GUT DISORDERS**

**Laurentiu Nedelcu<sup>1</sup>**

<sup>1</sup>*Universitatea Transilvania, Brasov, Romania*

Herbal medication has been used for a long time and continues to be accepted by many patients or indicated by some doctors. It is used all over the world and by patients of all ages. The most common conditions in which herbal therapy is used are: pain syndrome, arthritis, psychiatric conditions, hypercholesterolemia and digestive symptoms. Herbal preparations as complementary and alternative medicine can control multiple treatment targets of brain-gut disorders simultaneously and relatively safely. A variety of products are used as therapeutic agents in disorders of the brain-gut axis and which are presumed to target the gastrointestinal symptoms. The preparations considered effective and safe in Irritable Bowel Syndrome and Functional Dyspepsia are Iberogast and Peppermint Oil. The role of herbal therapies in functional gastrointestinal diseases is still unclear and mechanism of action have not been fully identified. It is a wrong perception to consider herbal therapy as harmless, the products being prepared from natural sources. The spectrum of pharmacological and toxicological effects of herbal supplements includes alteration of lab results, allergic reactions, organ damage, teratogenicity. There are still few data regarding the safety and efficacy of most herbal products. Adverse reactions may occur due to the toxic effects of active ingredients, contaminants or idiosyncratic drug reactions. The lack of rigorous assessment and the mediocre quality of many clinical trials are important limitations of herbal therapy.

## **OP15. CORRELATIONS BETWEEN GUT MICROBIOTA AND ANOREXIA NERVOSA**

**Paul J. Porr<sup>1</sup>**

<sup>1</sup>*Sibiu, Romania*

Anorexia nervosa is a psychiatric disorder defined by an extremely low body weight, a devastating fear of weight gain, and body image disturbance.

The etiopathogenesis of the disease remains unclear.

Recent advances in sequencing techniques used for microbial detection in the gut revealed that this disease is associated with dysbiosis, manifested by low microbial diversity and significant differences as compared to healthy individuals. The microorganisms present in the gut represent a part of the microbiota- gut –brain axis that affect the central nervous system and the human behavior via the production of various neuroactive compounds. In addition, cells of the immune system are equipped with receptors for these neuroactive substances. Also the microbiotic antigens can mimic some host neuropeptides and hormones, triggering the production of autoantibodies which cross-react with these compounds. These autoantibodies can be associated with anxiety, depression, eating and sleep disorders.

## **OP16. ESOPHAGEAL HIGH-RESOLUTION IMPEDANCE MANOMETRY IN ASYMPTOMATIC SCLERODERMA PATIENTS – IS IT BETTER TO BE PROACTIVE?**

**Claudia Puscasu<sup>1</sup>**, Anca Sugeac<sup>1</sup>, Andreea Bengus<sup>1</sup>, Andrei Voiosu<sup>1,2</sup>, Bogdan Mateescu<sup>1,2</sup>

<sup>1</sup>*Gastroenterology unit, Colentina Clinical Hospital, Bucharest, Romania*

<sup>2</sup>*Internal Medicine department, "UMF" Carol Davila, Bucharest, Romania*

Objectives: Gastrointestinal manifestations have a high prevalence in systemic sclerosis (SSc) patients, with esophageal dysmotility occurring in 50% to 90% of patients. However, there are some discordances between clinical manifestations and manometric findings, almost half of the patients being asymptomatic.

Methods: We analyzed a series of 13 asymptomatic patients with diagnosed with SSc and we performed endoscopy and high-resolution impedance manometry (HRiM) using the Sandhill Scientific high-resolution manometry system. Endoscopic features suggestive of impaired esophageal motility such as erosive esophagitis, esophageal stenosis or Barrett's esophagus were recorded. HRiM parameters such as Integrated relaxed pressure (IRP) and esophageal body contractility vigorosity, determined by mean distal contractile integral (DCI) were further analyzed using InSIGHT software.

Results: All evaluated patients presented manometric abnormalities consistent with disorder of peristalsis, regardless of the presence or absence of endoscopic lesions. The most frequent manometric findings were ineffective motility and hypotony of the lower esophageal sphincter.

Conclusions: Early identification of esophageal dysmotility in asymptomatic patients with systemic

sclerosis by HiRM could be useful to enable implementation of management strategies in patients potentially at risk for increased morbidity and mortality.

Keywords: scleroderma, manometry, dysmotility, hypotony

### **OP17. ESOPHAGEAL BLEEDING IN LONG-LASTING ACHALASIA COMPLICATED BY STASIS ULCER**

**Claudia Puscasu<sup>1</sup>**, Ionuț Meleșteu<sup>1</sup>, Anca Sugeac<sup>1</sup>, Bogdan Mateescu<sup>1,2</sup>

<sup>1</sup>*Colentina Clinical Hospital, Bucharest*

<sup>2</sup>*Carol Davila University of Medicine and Pharmacy, Bucharest*

Achalasia is rare motor disorder characterized by esophageal aperistalsis and incomplete relaxation of the lower esophageal sphincter, commonly complicated by esophageal dilation with subsequent sigmoidization of the esophagus, pneumonia or lung abscesses due to food regurgitation and aspiration. Although esophageal hemorrhage may occasionally occur due to esophageal stasis and esophagitis, severe bleeding from achalasia is exceedingly rare.

We present the case of a 52-year-old female with a history of stroke and long-lasting achalasia which presented with sudden onset of hematemesis and altered general status. On admission the patient required fluid resuscitation and blood transfusion, and had no signs of active bleeding. An upper gastrointestinal endoscopy was performed that revealed a dilated esophagus with a large adherent blood clot and no signs of active bleeding. After fragmenting and extracting the clot using a Dormia basket, multiple irregular ulcers were observed in the middle and lower esophagus, one with a visible vessel without active bleeding, presumed to be the bleeding source. Endoscopic treatment consisted of hemostasis using a metallic clip for the esophageal ulcer with high-risk stigmata and balloon dilation with a 35mm polyethylene balloon for the achalasia. Further treatment included high-dose proton pump inhibitors and parenteral nutrition and the patients was scheduled to return for another session of pneumatic dilation.

The particularity of the case lies in the presence of a rare complication of achalasia, which can predispose to stasis ulcers, leading to possibly life-threatening esophageal bleeding.

Keywords: achalasia, bleeding, ulcer, pneumatic dilation

### **OP18. IRRITABLE BOWEL SYNDROME AND BODY WEIGHT**

**Flaviu Rusu<sup>1,2</sup>**, Andrei-Vasile Pop<sup>1,2</sup>, Nita Andreea<sup>2</sup>, Dan L. Dumitrascu<sup>1,2</sup>

<sup>1</sup>*"Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania*

<sup>2</sup>*Cluj County Clinical Emergency Hospital, 3rd Department of Internal Medicine Cluj-Napoca, Romania*

**Introduction / Objective:** Weight changes in patients with irritable bowel syndrome (IBS) are often a consequence of dietary and lifestyle modifications aimed at symptom management. This paper explores the relationship between IBS, body weight, and inflammation markers.

**Methods / Methodology:** A literature review was conducted using the PubMed database with keywords including IBS, obesity, inflammation, and prevalence. We aimed to update data on IBS and obesity prevalence and identify relevant inflammation markers.

**Results:** In 2022, 1 in 8 individuals globally lived with obesity. The prevalence of IBS is approximately 4.1% in the general population. Notable serum markers include decreased IL-10 and increased levels of TNF $\alpha$ , TGF $\beta$ 1, and CRP among obese IBS patients. European guidelines recommend nutritional screening and tailored weight loss strategies for IBS patients.

**Conclusions / Discussions:** The association between body mass index (BMI) and IBS symptoms varies significantly across populations. While obesity is linked to increased IBS risk in certain groups, other studies show an inverse relationship. Individualized approaches are essential for effective management.

### **OP19. POST-ATRIAL FIBRILLATION ABLATION GASTROPARSIS: CHALLENGES IN TREATMENT AND THE ROLE OF CHOLINERGIC AGENTS**

**Ioana Rusu<sup>1</sup>**, Prof. Dan L. Dumitrascu<sup>1</sup>

<sup>1</sup>*2nd Department of Internal Medicine, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania*

**Introduction:** Gastroparesis, marked by delayed gastric emptying, is a rare but notable complication after atrial fibrillation ablation, often resulting from vagal nerve injury that disrupts gastrointestinal function. Its occurrence in post-ablation patients is frequently overlooked, complicating diagnosis and management. This case report emphasizes the emergence of gastroparesis after ablation and the varied responses to prokinetic treatments, underscoring the need for awareness and individualized therapeutic strategies.

**Case description:** A 56-year-old male patient, with a history of atrial fibrillation, underwent a catheter ablation procedure. Following the procedure, the patient developed persistent gastrointestinal symptoms, including bloating, nausea, excessive eructation, and a significant reduction in alimentary intake. Over a period of several months, the patient

experienced unintended weight loss of approximately 10 kg. A suspicion of gastroparesis lead to the recommendation of performing gastric scintigraphy which revealed delayed gastric emptying, consistent with a diagnosis of gastroparesis. Initial management included the prescription of prucalopride, a prokinetic agent, aimed at enhancing gastrointestinal motility. However, this treatment failed to produce clinical improvement. Subsequently, the patient was switched to neostigmine, a cholinesterase inhibitor with prokinetic properties, which resulted in a marked improvement of symptoms.

Discussion: This case highlights the risk of post-ablation gastroparesis in atrial fibrillation patients, likely due to vagal nerve injury or autonomic dysfunction. The varied responses to prokinetic treatments underscore the need for personalized therapy. Notably, the effective management with neostigmine after prucalopride failure suggests that cholinergic agents may be beneficial for refractory gastroparesis.

Conclusion: This case exemplifies the challenges in diagnosing and treating gastroparesis after atrial fibrillation ablation. It stresses the importance of clinicians being alert to gastrointestinal complications and adopting individualized treatment strategies. The positive response to neostigmine enhances our understanding of therapeutic options for refractory gastroparesis and encourages further studies on the connection between cardiac procedures and gastrointestinal motility issues.

## **OP20. QUALITY OF LIFE IN PATIENTS WITH GASTROESOPHAGEAL REFLUX DISEASE AND COMORBIDITIES**

**O. Sârbu<sup>1</sup>, E. Munteanu<sup>1</sup>, M. Stoica<sup>1</sup>, V. Istrati<sup>1</sup>**

*<sup>1</sup>Department of Internal Medicine-Semiology, Nicolae Testemițanu State University of Medicine and Pharmacy, Chisinau, Republic of Moldova*

Introduction: Gastroesophageal reflux disease (GERD) affects more than 1 billion people worldwide. In the Republic of Moldova, the prevalence of the disease is 18%, and the incidence of GERD is significantly higher in certain groups of patients with pre-existing conditions, reaching up to 40% when associated with comorbidities. This study aimed to evaluate the quality of life in patients with GERD and comorbidities. Materials and Methods: The study included 200 patients undergoing treatment in the Gastroenterology Department: 150 patients with GERD and comorbidities (Group I, study group) and 50 healthy individuals (Group II, control group). Patients were asked to complete the SF-36 questionnaire to assess their quality of life, with all dimensions

correlated to the presence of GERD and associated comorbidities. Results: Of the total number of patients identified with GERD, 57.2% were women, and 56.8% were aged between 50 and 60 years. The distribution of GERD with comorbidities was as follows: 20.6% had GERD and hypertension, 9.5% had GERD and hypercholesterolemia, 11.2% had GERD and obesity, 5.2% had GERD and type 2 diabetes, 3.3% had GERD and bronchial asthma, 2.9% had GERD and chronic obstructive pulmonary disease, and 0.3% had GERD and obstructive sleep apnea. According to the SF-36 questionnaire, patients showed a reduced quality of life across several dimensions: 35% reported a low quality of life due to physical health impairment, 40% cited pain as a factor reducing quality of life, 45% mentioned emotional problems, 17% experienced early fatigue, and 8% reported reduced social functioning. Conclusions: In conclusion, the complications of chronic comorbidities, the presence of pain, emotional problems, and challenges in social adjustment significantly reduce the quality of life in patients by interdependently worsening GERD symptoms and associated diseases.

Key words: quality of life, GERD, comorbidities.

## **OP21. FUNCTIONAL DYSPEPSIA WITH POSTPRANDIAL DISTRESS SYNDROME AND SUPERIOR MESENTERIC ARTERY SYNDROME**

**Constantin Simiras<sup>1</sup>, Abdulrahman Ismaiel<sup>2</sup>, Delia-Maria Simiras<sup>3</sup>, Dan L. Dumitrascu<sup>2</sup>**

*<sup>1</sup>Institute of Gastroenterology and Hepatology, "Grigore T. Popa" University of Medicine and Pharmacy, 700111 Iasi, Romania.*

*<sup>2</sup>2nd Department of Internal Medicine, "Iuliu Hatieganu" University of Medicine and Pharmacy, 400006 Cluj-Napoca, Romania.*

*<sup>3</sup>2nd Department of Internal Medicine, "Grigore T. Popa" University of Medicine and Pharmacy, 700115 Iasi, Romania.*

Introduction: Upper abdominal discomfort, nausea, vomiting, and pain are overlapping symptoms of two gastrointestinal disorders: functional dyspepsia (FD) and superior mesenteric artery syndrome (SMAS). FD, and especially postprandial distress syndrome, presents as recurrent upper abdominal discomfort or vomiting without an identifiable organic cause, while SMAS have similar symptoms. The purpose of this systematic review is to investigate the possible misdiagnosis and correlation between FD and SMAS. Methods: Using predetermined keywords, a comprehensive search of PubMed, Scopus, EBSCO,

and Web of Science was conducted until March 2024. Our systematic review includes full-text papers that met our inclusion and exclusion criteria. The studies that were included were evaluated using the NHLBI quality assessment technique. Results: Our qualitative synthesis comprised four papers in total. Three investigations backed up the theory that FD and SMAS are related, indicating that FD patients may not be fully aware of SMAS. The last study examined the characteristics of SMAS patients and found that a significant incidence was seen in those who had previously been diagnosed with FD. This review highlights the difficulties in diagnosing FD and SMAS since their symptoms overlap, underscoring the importance of physician knowledge in preventing misdiagnosis. Conclusion: SMAS is more frequent in people who have had FD diagnoses in the past. SMAS diagnosis can be difficult due to shared symptoms between the two illnesses. To clarify underlying mechanisms and create diagnostic algorithms for the prompt detection and treatment of SMAS in FD patients, further investigation is required. Keywords: functional dyspepsia; superior mesenteric artery syndrome; Wilkie syndrome.

## OP22. DIAGNOSTIC AND THERAPEUTIC APPROACH TO THE YOUNG PATIENT WITH WILSON'S DISEASE

**M. Stoica**<sup>1</sup>, F. Elizabeth Aby<sup>1</sup>, E. Munteanu<sup>1</sup>, O. Sarbu<sup>1</sup>, V. Istrati<sup>1</sup>

<sup>1</sup>Department of Internal Medicine, State University of Medicine and Pharmacy Nicolae Testemitanu, Chisinau, Republic of Moldova

Introduction. Wilson's disease (WD) is a rare genetic disorder that causes excessive copper accumulation in the liver and brain, leading to hepatic symptoms (liver failure) and neurological symptoms such as dysarthria (46-97%), gait abnormalities (28-75%), dystonia (38-69%), and parkinsonism (12-58%). Wilson's disease should be suspected in young patients with unexplained liver damage, neurological or psychiatric symptoms, or a family history of the disease. Material and Methods. We conducted a review of studies from PubMed, Cochrane, and NCBI, analyzing diagnostic and therapeutic approaches for the neurological symptoms of WD. Results. Early diagnosis can prevent severe complications such as liver failure or irreversible neurological damage. Diagnostic tests, including 24-hour urine copper determination (0.64–1.6  $\mu\text{mol}/24\text{ h}$ , sensitivity 75.6%), liver copper test (4  $\mu\text{mol}/\text{g}$ , sensitivity 99.4%), ceruloplasmin test (0.14–0.2 g/L, sensitivity 77.1%–99%), and ATP7B protein quantification, demonstrated a sensitivity of 92.1%. MRI has proven to be the most sensitive imaging tool. D-penicillamine is highly effective as a first-line

induction therapy, with trientine as an alternative for those intolerant to D-penicillamine. Zinc salts are effective for maintenance therapy. Bis-choline tetra-thiomolybdate (TTM) is being evaluated as a promising first-line treatment. Speech therapy, physical therapy, assistive devices, Trihexyphenidyl, botulinum toxin (for focal symptoms), clonazepam, carbidopa/levodopa, and dopamine agonists have significantly contributed to the improvement of neurological symptoms in patients with WD. Conclusions. The diagnostic and therapeutic approach to Wilson's disease, especially in young patients, requires early diagnosis, rapid initiation of chelation therapy, and long-term monitoring to prevent severe complications and improve patient prognosis. Keywords: Wilson's disease, neurological symptoms, copper toxicity

## OP23. SUPRAGASTRIC BELCHING

**Teodora Surdea-Blaga**

2nd Department of Internal Medicine, Iuliu Hatieganu University of Medicine and Pharmacy, Cluj-Napoca, Romania

Belching involves the movement of air from the esophagus or stomach into the pharynx. It is triggered by a vagally mediated reflex that relaxes the lower esophageal sphincter (LES) in response to increased gastric volume from air accumulation. This process results in gastric ventilation. Belches can be classified as supragastric or gastric, depending on their origin. Belching becomes problematic when excessive and bothersome. According to Rome IV criteria, belching disorders are diagnosed if belching occurs for at least 3 days a week over a 3-month period. Intraluminal impedance measurement helps differentiate between the two types of belching. Aerophagia is a distinct disorder, with a different pathogenetic mechanism.

SGB is a learned and self-induced behavior, without an organic cause. SGB is absent during sleep and decreases when patients are unaware or distracted. The esophageal impedance is the gold standard for diagnosis. SGB involves air entering the esophagus from the pharynx, usually through a rapid antegrade flow followed by a retrograde movement of air. In SGB the air comes into the esophagus in 2 ways: the air-suction method and the air-injection method. In gastric belching, air accumulated in the stomach is eliminated. Esophageal impedance monitoring tracks gas movement and distinguishes SGB from gastric belching.

Psychological therapies are crucial for the treatment of SGB. Reassuring the patient and explaining the behavioral nature of SGB helps them understand and control their symptoms. Speech therapy, focusing on exercises like glottis training and vocal exercises improve symptoms in 83% of patients. Cognitive-Behavioral Therapy helps patients

recognize early warning signs and adopt preventative strategies, leading to long-term symptom relief and improved quality of life (QOL). Breathing exercises reduce belching by restoring the gastroesophageal pressure gradient. Baclofen, which reduces transient LES relaxations, has shown some effectiveness, but its benefits remain uncertain based on conflicting study results. Keywords: belching, esophageal pH-impedance study, speech therapy

## **OP24. CHALLENGES IN THE MANAGEMENT OF FUNCTIONAL BILIARY DISORDERS**

**Eugen Tcaciuc<sup>1</sup>**

*<sup>1</sup>Department of Internal Medicine, Gastroenterology Discipline, Nicolae Testemițanu State University of Medicine and Pharmacy, Chișinău, Republic of Moldova*

Diagnostic errors in the gallbladder and sphincter of Oddi disorders are common and can result in unnecessary surgery and prolonged patient suffering. These mistakes stem from a misinterpretation of biliary-like pain, an excessive reliance on imaging modalities, and a failure to utilize specialized diagnostic tests. Recurrent biliary-like pain in the epigastrium or right upper quadrant can mimic other conditions, such as chronic pancreatitis and gastric ulcer, leading to misdiagnosis when clinicians fail to conduct a thorough investigation. Overreliance on ultrasound can lead to missed small stones or chronic cholecystitis. When no gallstones are present, functional gallbladder disorder may be overlooked entirely. A reduced ejection fraction on cholescintigraphy and normal liver and pancreatic enzymes are supportive evidence. Cholecystectomy is frequently recommended for treatment; however, the outcomes in pain relief vary widely. Many patients with presumed disease may experience spontaneous symptom resolution, while others may continue to have pain even after the procedure. Therefore, it's important not to rush into cholecystectomy. Functional biliary sphincter of Oddi disorder presents a diagnostic challenge as its symptoms are often mistaken for gallbladder disease, leading to unnecessary cholecystectomy, without symptom relief. Post-cholecystectomy patients pose additional difficulties, as changes in anatomy can obscure the underlying cause of pain. Sphincter manometry's validity as the gold standard for diagnosis is now in question. The results of sphincterotomy for elevated pressures of the sphincter of Oddi at manometry were unimpressive. Consider therapeutic trials with antispasmodic drugs or neuromodulators when a functional origin seems likely.

In conclusion, enhancing diagnostic precision in gallbladder and sphincter of Oddi disorders

necessitates a thorough, multidisciplinary approach, utilizing appropriate imaging and testing while carefully assessing the patient's overall clinical presentation. Addressing these diagnostic pitfalls can lead to improved patient outcomes and a reduction in unnecessary interventions.

Keywords: gallbladder, sphincter of Oddi, functional disorders

## **OP25. CYCLIC VOMITING SYNDROME IN CHILDREN**

**Laura-Mihaela Trandafir<sup>1,2</sup>**, Gabriela Paduraru<sup>1,2</sup>, Laura Bozomitu<sup>1,2</sup>, Gabriela Ghiga<sup>1,2</sup>, Nicoleta Gimiga<sup>1,2</sup>

*<sup>1</sup>Universitatea de Medicina și Farmacie Grigore T. Popa Iași, România*

*<sup>2</sup>Spitalul Clinic de Urgență pentru Copii „Sf. Maria”, Iași, România*

Cyclic Vomiting Syndrome (CVS) is identified by acute, stereotyped and recurrent episodes of intense nausea with incoercible vomiting, lasting from a few hours to a few days; both children and adults are affected, although the clinical presentation and natural history vary somewhat with age. CVS is an underdiagnosed episodic syndrome due to lack of confirmatory testing, characterized by frequent hospitalization, and poor quality of children life. CVS mainly occurs in pre-school or early school-age, but infants and elderly onset have been also described. The etiopathogenesis is largely unknown, but it is likely to be multifactorial. Recent evidence suggests that aberrant brain-gut pathways, mitochondrial enzymopathies, gastrointestinal motility disorders, calcium channel abnormalities, and hyperactivity of the hypothalamic-pituitary-adrenal axis in response to a triggering environmental stimulus are involved. A distinction with other differential diagnoses is a challenge for clinicians. Although extensive and invasive investigations should be avoided, baseline testing toward identifying organic causes is recommended in all children with CVS. The management of CVS requires an individually tailored therapy. Management of acute phase is mainly based on supportive and symptomatic care. During the interictal period, non-pharmacologic measures as lifestyle changes and the use of reassurance and anticipatory guidance seem to be effective as a preventive treatment. The indication for prophylactic pharmacotherapy depends on attack intensity and severity, and if attack treatments are ineffective or cause side effects. The present work proposes a review of the literature to identify relevant current problems and the management of pediatric patients affected by this disorder, in a multidisciplinary team.

Keywords :cyclic vomiting, children, functional gastrointestinal disorders

## **OP26. FUNCTIONAL DYSPESIA ASSESSMENT- NEW PROMISING TECHNIQUES**

**Vadim Rosca<sup>1</sup>**, Oana Barboi<sup>1</sup>, Diana Floria<sup>1</sup>, Radu Vulpoi<sup>1</sup>, Liliana Gheorhe<sup>1</sup>, Gologan Elena<sup>1</sup>, Catalina Mihai<sup>1</sup>, Georgiana Gilca-Blanariu<sup>1</sup>, Simona Juncu<sup>1</sup>, Camelia Cojocariu<sup>1</sup>, Vasile-Liviu Drug<sup>1</sup>

<sup>1</sup>St. Spiridon County Hospital, Iasi, Romania

**Introduction.** Functional Dyspepsia (FD) is a disorder of gut-brain interaction (DGBI) with chronic symptoms and no organic cause. Diagnosing FD requires meeting the Rome IV criteria, which includes a symptom onset at least six months prior. FD affects up to 20% of the general population, posing a significant healthcare challenge due to its impact on patient's quality of life and the burden on healthcare systems.

**Material and method.** The presentation explores various tests used to assess functional dyspepsia (FD) and its impact on gastric motility. The rapid water drink test evaluates liquid tolerance, showing that FD patients tolerate smaller water volumes and experience more symptoms than healthy volunteers (HV). The rapid nutrient drink test demonstrates similar findings but with even lower tolerated volumes. The satiety drinking test measures gastric accommodation by slow nutrient intake until maximum satiety is reached, with FD patients showing reduced tolerance. The novel ultrasonography drinking test combines water intake with real-time imaging, revealing delayed gastric emptying and heightened symptom sensitivity in FD patients. Functional MRI (fMRI) identifies abnormal brain activity in regions related to gastric sensation, linking cognitive factors like anxiety to altered gastric responses in FD patients. Additionally, MRI-based assessments of gastric volume, surface area, and geometry provide detailed insights into gastric filling and emptying. This method shows distinct patterns in different stomach compartments during digestion, highlighting the fundus's role as a reservoir and revealing the nonhomogeneous distribution of wall tension.

**Results and conclusion.** These findings suggest MRI and echography's potential as a valuable, non-invasive tool for assessing gastric motility and emptying in FD patients. However, challenges in reproducibility remain across studies due to varying methodologies.

## **OP27. INTESTINAL OCCLUSION MIMICKING VERTEBRO-BASILAR STROKE**

**Antonia Ioana Vasile<sup>1,2</sup>**, Cristina Nica<sup>1</sup>, Cristina Tiu<sup>1,2</sup>

<sup>1</sup>Spitalul Universitar de Urgență, București, Romania, <sup>2</sup>Universitatea de Medicină și Farmacie Carol Davila, București, Romania

**Objective:** Intestinal occlusion leads to intra-abdominal hypertension which raises the diaphragm and compresses the organs and the vascular pathways, leading to hypertension in most territories, including the brain. It presents with abdominal pain and distention, nausea, vomiting, and constipation. However, a vertebro-basilar stroke can present with diplopia, cranial nerve palsy, motor impairment, nystagmus, ataxia, vomiting, dysarthria, and dysphagia.

**Method:** Case presentation of a 79-year-old patient who presented at the Neurological Emergency Department for acute symptomatology characterized by: left motor impairment and dizziness. As medical history, we highlight colon cancer that was operated on and treated with chemotherapy, obesity, carotidian and vertebral atheromas, hypertension, mild cognitive impairment, and hemorrhagic stroke. Clinical examination revealed: cardiopulmonary balanced, temporal and spatial disoriented, affected short-term memory, dysarthria, facial asymmetry, and left motor impairment 4/5MRC, left hypotonia. The patient presented multiple episodes of vomiting, it was hard to determine whether it was bilious vomiting or hematemesis.

**Results:** The clinical presentation based on dizziness, motor impairment, hypotonia, and vomiting, along with the cerebrovascular risk factors was consistent with the presumptive diagnosis of vertebro-basilar stroke. The head MRI revealed only the thalamic sechellary hemorrhagic lesion. Because of the vomiting, the patient underwent emergency superior endoscopy which did not show any signs of active bleeding. The abdominal CT revealed abdominal occlusion based on adherence syndrome with hydroaeric levels on the transverse and descendent colon. The patient went under emergency surgery.

**Conclusions:** We presented a patient with multiple cerebrovascular risk factors who presented for symptomatology that was consistent with vertebro-basilar stroke, which turned out to be an abdominal occlusion. We highlight the idea that an elderly patient who presents with an altered conscious state and with cognitive impairment can mimic diagnoses between medical specialties. So a good anamnesis with the family and a thorough paraclinical examination can be vital.

**Keywords:** abdominal occlusion, nausea, bilious vomiting, vertebro-basilar stroke.

## Chapter 2. E-Posters

### EP1. VALUATION OF THE PATIENT WITH GASTROESOPHAGEAL REFLUX DISEASE PRIOR TO ANTI-REFLUX SURGERY: THE IMPORTANCE OF HIGH-RESOLUTION ESOPHAGEAL MANOMETRY

**Denis Ardeleanu<sup>1</sup>**, Viorel Istrate<sup>1</sup>, Eugen Tcaciuc<sup>1</sup>

*<sup>1</sup>State University of Medicine and Pharmacy of the Republic of Moldova „Nicolae Testemitanu”, Chişinău, Republic of Moldova*

**Introduction:** Evaluating the pathogenesis of patients with gastroesophageal reflux disease (GERD) presents a challenge for clinicians. Hiatal hernias are one of the primary causes of refractory GERD, complicating diagnosis and treatment. Understanding the role of high-resolution esophageal manometry is crucial in identifying the underlying mechanisms and tailoring appropriate therapeutic approaches.

**Materials and Methods:** Patients with gastroesophageal reflux disease (GERD) indicated for anti-reflux surgery were selected. Endoscopy, barium swallow radiography, and high-resolution esophageal manometry were performed. The morphology of the gastroesophageal junction (GEJ) was compared. Statistical analysis was conducted on parameters including age, sex, typical and atypical symptoms, symptom frequency, manometric parameters, and the presence or absence of hiatal hernia for each investigative method. Subjects were divided into two subgroups: those with and without hiatal hernia based on manometric data.

**Results:** The average age was 48 years, with 26 males (65%). Ninety percent reported heartburn, and 82.5% (33 subjects) experienced regurgitation. Xerostomia was present in 40% (16 subjects), and sleep disturbances due to symptoms occurred in 57.5% of cases. Manometric data revealed hiatal hernia in only 15 patients, with type III GEJ morphology; 21 had type II morphology, and 4 had no changes at the GEJ. Endoscopically, 85% of cases corresponded to GEJ morphology identified by manometry, whereas barium swallow showed agreement in only 67.5% of cases. Hypotensive lower esophageal sphincter was detected manometrically in 52.5% of cases, and ineffective motility in 32.5%. Two subgroups were created: with and without hiatal hernia based on manometry. Esophagitis was found in 80% of patients with hiatal hernia versus 64% without. Regurgitation occurred in 100% of those with hiatal hernia compared to 72% without. Sleep

disturbances were present in 80% versus 44% of cases. The average age for those with hernia was 57 years versus 43 years ( $p = 0.0025$ ). DCI for those with hiatal hernia was 1104 versus 544 ( $p = 0.001089$ ). Ineffective motility was seen in 6.6% of those with hernia and 48% without.

**Conclusion:** Upper digestive manometry is crucial for determining the pathogenesis of gastroesophageal reflux disease. Patients scheduled for anti-reflux surgery must undergo high-resolution esophageal manometry.

**Keywords:** reflux disease, esophagogastric junction, manometry

### EP2. DOUBLE TROUBLE: SUPERIOR MESENTERIC ARTERY SYNDROME AND SMALL INTESTINAL BACTERIAL OVERGROWTH – CASE REPORT IN PATIENTS AT RISK

**Sebastian Bar<sup>1</sup>**, Ismaiel Abdulrahman<sup>1</sup>, Dan L. Dumitrascu<sup>1</sup>

*<sup>1</sup>2nd Department of Internal Medicine, Cluj County Clinical Emergency Hospital, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania*

**Introduction:** Superior mesenteric artery (SMA) syndrome is an uncommon cause of duodenal obstruction, resulting from compression of the third portion of the duodenum between the aorta and the SMA. The condition is often difficult to diagnose due to nonspecific symptoms. Small intestinal bacterial overgrowth (SIBO) can coexist with SMA syndrome, complicating the clinical picture and impacting patient quality of life.

**Materials and methods:** A 45-year-old woman presented with persistent diffuse abdominal pain, nausea, recurrent vomiting, postprandial bloating, severe fatigue, and anorexia following significant weight loss of approximately 20 kg over two years. Initially, she lost weight intentionally (10 kg), after which she began to experience progressive gastrointestinal symptoms, worsened by food intake. Gastroscopy identified a small hiatal hernia, leading to a Toupet fundoplication, but her symptoms worsened post-surgery. Physical examination and lab results were generally unremarkable, with the exception of mild anemia, hypomagnesemia, and hypoproteinemia. A thorough evaluation, including esophageal manometry, barium swallow, gastric emptying scintigraphy and drink-test, showed no abnormalities. SMA syndrome was suspected after

exclusion of other conditions, and a contrast-enhanced abdominal CT confirmed the diagnosis. Additionally, a breath test for SIBO was positive, suggesting a concurrent factor partially contributing to her symptoms. The patient received conservative treatment, with improvement of her symptoms. Discussions: SMA syndrome is often debated and requires exclusion of other common gastrointestinal diseases. Associated factors include rapid weight loss, prolonged bed rest, and certain surgeries. Diagnosis requires high suspicion and careful evaluation. Concurrent SIBO can worsen symptoms, and targeted testing is essential for a comprehensive treatment approach. Conclusions: Though rare, SMA syndrome should be considered in patients with persistent dyspeptic symptoms and weight loss. Timely diagnosis can prevent nutritional complications, and addressing SIBO may improve symptom management. Keywords: Dyspepsia; Superior mesenteric artery syndrome; Small intestinal bacterial overgrowth.

### **EP3. PERSONALITY CHARACTERISTICS OF THE PATIENT WITH PEPTIC ULCER**

**Rodica Bugai<sup>1</sup>**, Maria Feghiu<sup>1</sup>

<sup>1</sup>SUMPh "Nicolae Testemițanu", Republic of Moldova

Introduction: Peptic ulcer (PU) continues to be a widely discussed disease in specialized literature and medical practice due to its etiopathogenic complexity, affecting young people and severe complications. Research shows that psychological factors can contribute to the development of the disease as well as to the patient's perception of clinical symptoms and their reporting, the patient's attitude towards the disease, treatment compliance and treatment outcome.

Material and methods: The study included the experimental group (EG): 19 patients with peptic ulcer (8-with gastric ulcer, 11- with duodenal ulcer), aged 26-47 years, mean age-36±0.94 years, and control group (CG): 25 practically healthy people, aged 21-36 years, average age-31±0.87 years. Male/female ratio: LE- 13/6, LC- 16/9. Both groups were given the MMPI Test short form (MINI-MULT), the participants being informed about the confidentiality of the obtained data and their strict use for experimental study.

Results: The study demonstrated the presence of PU in 68.42% cases of young patients (35-44 years old), with high school (42.11%) and higher education (33.33%), trained in mental activities, accompanied by stress, psycho-emotional overload, physical and mental overwork; celibates - 57.89%; with late referral to the doctor-63.16%. The results of the MINI-MULT MMPI test demonstrate major, statistically significant differences ( $p < 0.05$ ) between EG and CG, on scales 1 (Hypochondria), 2 (Depression), 3 (Hysteria), 7 (Psychasthenia).

Patients with PU are mostly more depressed, anxious-hypochondriac than CG, which also associates other risk factors: eating disorders (100%), stress (89.47%), smoking (73.69%), alcohol (42.11%) etc.

Conclusions: People with certain personality traits have a higher risk of developing PU through the involvement of some neuroendocrine mechanisms of physiological and social maladaptation. In order to achieve long-lasting therapeutic results in patients with PU, it is necessary to include in the treatment psychological programs for recovery and effective adaptation to the disease.

Key words: peptic ulcer, personality traits

### **EP4. Navigating Hiatal Hernias: Symptomatic Presentation and Conservative Management**

**Vera Ciornolutchii<sup>1</sup>**, Abdulrahman Ismaiel<sup>1</sup>, Dan L. Dumitrascu<sup>1</sup>

<sup>1</sup>2nd Department of Internal Medicine, Cluj County Clinical Emergency Hospital, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania

Introduction: Hiatal hernias are prevalent and frequently asymptomatic, with most individuals experiencing minimal to no significant symptoms. Although these hernias can occasionally contribute to reflux, they should not be classified as a disease. Many patients misinterpret their diagnosis due to the absence of a clear correlation between hernia size and symptom severity; even sizable hernias may remain asymptomatic.

Case Description: We present the case of a 68-year-old female diagnosed with a large sliding hiatal hernia. She reported intermittent stabbing pain in the left hypochondrium, daily heartburn, and postprandial regurgitation. Previous investigations, including a contrast-enhanced CT scan, indicated a large transhiatal hernia, prompting a referral for surgical consultation. However, the patient expressed apprehension regarding invasive surgery and chose to pursue further diagnostic evaluation instead. The physical examination was unremarkable, and laboratory tests revealed only hypercholesterolemia. An upper gastrointestinal endoscopy identified a large compound hiatal hernia, which was also corroborated by a barium swallow test. Given the lack of significant symptoms, a conservative treatment plan involving antacids was recommended, and surgical intervention was deemed unnecessary at this time.

Discussion: This case underscores the importance of thorough assessment and management of hiatal hernias. The choice to implement a conservative approach with antacids aligns with the patient's

preferences and her reluctance for surgical options. This case reinforces the perspective that many patients with hiatal hernias can be effectively managed without surgical intervention. Regular follow-up is essential to monitor any changes in symptoms or overall condition, ensuring prompt action if necessary.

Conclusions: This case illustrates that hiatal hernias can be successfully managed with conservative measures. Continuous evaluation is vital to modify treatment as needed, especially if the patient's symptoms evolve or intensify.

Keywords: Hiatal hernia; Barium swallow test; Endoscopy; Conservative management; Case report.

## EP5. DYSPAGIA LUSORIA IN A PATIENT WITH ROUX-EN-Y GASTRECTOMY

**Alexandru-Ionut Coseru<sup>1,2</sup>**, Oana-Bogdana Barboi<sup>1,2</sup>, Oana-Cristina Petrea<sup>1,2</sup>, Radu-Alexandru Vulpoi<sup>1,2</sup>, Diana-Elena Floria<sup>1,2</sup>, Vadim Rosca<sup>1,2</sup>, Roxana Nemteanu<sup>1,2</sup>, Irina Ciortescu<sup>1,2</sup>, Alina Plesa<sup>1,2</sup>, Vasile-Liviu Drug<sup>1,2</sup>

<sup>1</sup>*Institute of Gastroenterology and Hepatology, Iasi, Romania*

<sup>2</sup>*Grigore T. Popa, University of Medicine and Pharmacy, Iasi, Romania*

Introduction. Dysphagia lusoria is a rare and complex form of dysphagia caused by an aberrant or anomalous subclavian artery compressing the esophagus, leading to difficulty swallowing.

Case description. A 68-year-old male with a history of Roux-en-Y gastrectomy secondary to a bleeding ulcer, presented with progressive dysphagia to both solids and liquids, accompanied by retrosternal discomfort. He reported recent weight loss. Initial esophagogastroduodenoscopy showed a pulsatile, smooth extrinsic compression on the posterior esophageal wall in the mid-esophagus, with no signs of stricture or recurrence of malignancy. High-resolution esophageal manometry revealed intermittent ineffective peristalsis around the site of compression. A computed tomography angiography of the chest confirmed an aberrant right subclavian artery compressing the esophagus, consistent with dysphagia lusoria. Surgical intervention was considered but the patient refused.

Discussion. In patients with altered gastrointestinal anatomy, such as those with a Roux-en-Y gastrectomy, diagnosing and managing dysphagia lusoria can be more complex. The patient's symptoms can be compounded by post-surgical changes, which may mimic or obscure the symptoms of extrinsic vascular compression, making timely diagnosis challenging. Advanced imaging is crucial to differentiate post-surgical

anatomical changes from other potential sources of dysphagia, and individualized surgical planning can optimize outcomes for patients with dual challenges, such as dysphagia lusoria and post-gastrectomy anatomy.

Conclusion. This case contributes to the limited body of knowledge on dysphagia lusoria and highlights the critical role of advanced imaging and personalized treatment strategies in optimizing patient outcomes for rare vascular anomalies impacting esophageal function.

Keywords: dysphagia lusoria, manometry, aberrant subclavian artery

## EP6. THE EFFECT OF THERAPEUTIC MEDICAL EDUCATION ON THE EFFECTIVENESS OF TREATMENT IN GASTROESOPHAGEAL REFLUX DISEASE

**Elena Gologan**, Oana Timofte, Georgiana Emmanuela Gîlcă Blanariu, AN Gologan, Mara Krysta Grumeza, DS Gologan, Mara Ilinca Timofte, A Olteanu, V Drug

*"Grigore T Popa" University of Medicine and Pharmacy, Iasi, Romania*

Introduction. Although PPI inhibitors are very efficient in the treatment of GERD, in some cases the doctors prefer a step-up therapeutic approach starting with a diet and lifestyle changes.

Method. 120 patients investigated in an outpatient gastroenterology service with GERD symptomatology, without alarm symptoms, was proposed a treatment based on diet and lifestyle changes for a period of one month with indications for subsequent treatment adjusted according to response and in addition, participation in an educational program about GERD delivered by voluntary students under the guidance of teaching staff. The program consisted of a 2-hour power-point presentation (which included data on anatomy, pathogenesis, diagnosis, treatment, diet, lifestyle, follow-up, complications).

Results. Only 90 patients accepted to participate in the educational program (75%), the others being reported as a control group. All patients received only dietary and lifestyle recommendations. The initial clinical evaluation performed by the attending physician was complex and the final evaluation, one month after the initial one, was anamnestic analyzing typical and atypical symptoms as well as including a satisfaction questionnaire. Among the 90 patients of the study group, a number of 7 (7.7%) requested re-evaluation after less than a month due to no change in symptoms (and acid-inhibiting treatment was initiated) and 42 (46.7%) reported the disappearance or significant

improvement of symptoms. Among those in the control group, 6 patients requested premature reevaluation for persistence of symptoms (20%) and 8 had remission or significant improvement in symptoms (26.7%). Among non-responder patients, 92.3% were obese or overweight, 61.5% were diabetic, and all were polymedicated for other diseases while in the study group only 50% were overweight or obese and 11% were diabetic.

Conclusions. The improvement of symptoms in GERD patients treated only with dietary and lifestyle changes is amplified by a therapeutic medical education.

Key words: gastroesophageal reflux disease, patient therapeutic education

## **EP7. MICROBIAL ASSOCIATION WITH CELL-FREE DNA METHYLATION TEST FOR COLORECTAL CANCER SCREENING**

**Lenuta - Ancuta Iacob<sup>1,3</sup>**, Diana Elena Iacob<sup>2</sup>, Emanuela Zâmbrean<sup>2</sup>, Florentin Romeo Nitu<sup>1,4</sup>, Lorand Savu<sup>1</sup>

<sup>1</sup>*Genetic Lab, Bucharest, Romania*

<sup>2</sup>*Genetic Lab, Iasi, Romania*

<sup>3</sup>*Institut of Biochemistry, Bucharest, Romania*

<sup>4</sup>*Faculty of Medical Engineering, University Politehnica of Bucharest, Bucharest, Romania*

Introduction: The colorectal cancer (CRC) accounted for approximately 10% of all new cancer cases globally[1].

Associations between gut microbiota and CRC have been widely investigated [2].

ColoTect is a non-invasive, sensitive screening test method for colorectal cancer (CRC) and precancerous lesions [3]. Clinical trial registration <https://www.chictr.org.cn/showproj.html?proj=192838>, identifier ChiCTR2300070520.

Microbial association with cell-free DNA (cfDNA) methylation testing is an emerging approach in colorectal cancer (CRC) screening. Recent research indicates that microbial signatures, particularly gut microbiota, may also play a role in colorectal cancer development. By combining cfDNA methylation testing with microbial profiling, this method aims to improve the accuracy and early detection of CRC, offering a non-invasive alternative to traditional screening methods like colonoscopy.

Methods: Human DNA is extracted from self-collected stool sample and used for the multiplex methylation specific qPCR to detect the methylation level of CRC gene markers: SDC2, ADHFE1, and PPP2R5C. The ColoTect test has >87% sensitivity and >93% specificity.

The microbial composition was detected using MyBioma test, which uses Next-Generation Sequencing (NGS)-based 16S ribosomal RNA

(rRNA) gene sequencing that is a well-established method for comparing sample phylogeny and taxonomy from complex microbiomes.

Results:

Microbiome sequencing was performed for fecal samples from 10 patients. Two patients were positive for high-risk CRC. The comparison of relative species abundance between microbiome tested patients and CRC high risk patients revealed the enrichment of several reported species associated with gut inflammation in CRC fecal samples, such as: *Prevotella* sp., *Erysipelotrichaceae* sp., *Streptococcus* sp., while the abundance of the protective bacteria *Bifidobacterium* sp. was low.

Conclusions: Our study reveals an association between the positive Cell-free DNA Methylation Test for Colorectal Cancer Screening and microbiome involved in gut inflammation, offering an understanding of the microbiota-host interaction that modulate immune response.

Keywords: colorectal cancer, inflammation, cell-free dna methylation, microbiome.

## **EP8. GASTROINTESTINAL SIDE EFFECTS OF STIMULANT AND NON-STIMULANT ADHD MEDICATIONS**

**Bianca Augusta Oroian<sup>1</sup>**, Gabriela Rusu-Zota<sup>1,2</sup>, Petronela Nechita<sup>3</sup>, Andreea Szalontay<sup>1,3</sup>

<sup>1</sup>*"Grigore T. Popa" University of Medicine and Pharmacy, Iasi, Romania*

<sup>2</sup>*"Sf. Spiridon" Emergency Clinical Hospital, Iasi, Romania,*

<sup>3</sup>*"Socola" Institute of Psychiatry, Iasi, Romania*

Introduction: Attention-deficit/hyperactivity disorder (ADHD) affects 5-7% of children and 2.5% of adults globally. Psychostimulants like methylphenidate are effective first-line treatments but are often associated with gastrointestinal (GI) side effects, including appetite suppression, nausea, and abdominal pain, which can impact treatment adherence. Non-stimulants like atomoxetine offer an alternative but also carry risks of GI disturbances. This review aims to examine the prevalence and mechanisms of GI side effects in ADHD patients using both stimulants and non-stimulants.

Methods: A review of studies published in the past decade was conducted using scientific databases, such as PubMed and Google Scholar. The inclusion criteria focused on studies reporting GI side effects in ADHD patients treated with stimulants or non-stimulants. Data were extracted on side effect prevalence, specific GI symptoms, and proposed mechanisms.

Results: Stimulant medications such as methylphenidate were consistently associated with GI side effects. Studies report that 25-40% of ADHD patients experience gastrointestinal

symptoms, with appetite suppression affecting 60-80% of patients. Nausea, abdominal pain, and constipation were reported in 10-30% of cases. A meta-analysis of 22 studies showed that methylphenidate significantly increased the risk of appetite loss and nausea compared to placebo, with amphetamines showing a similar side effect profile. The underlying mechanisms may involve central dopaminergic and noradrenergic pathways affecting appetite regulation, as well as delayed gastric emptying, which exacerbates nausea and abdominal discomfort.

In contrast, non-stimulant medications such as atomoxetine also demonstrated a notable prevalence of GI side effects, although slightly lower than stimulants. Approximately 15-25% of

patients on atomoxetine reported appetite suppression and nausea, with vomiting observed in 5-10%. Atomoxetine's GI effects are thought to stem from its selective inhibition of norepinephrine reuptake, which impacts autonomic regulation of the gastrointestinal system.

Conclusions: Both stimulant and non-stimulant ADHD medications are linked to significant GI side effects, with stimulants posing a higher risk, particularly for appetite suppression and nausea. These side effects can impact treatment adherence and should be carefully considered in long-term ADHD management.

Keywords: ADHD, gastrointestinal symptoms, side effects, methylphenidate, atomoxetine

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