

Comparison of two different approaches of ultrasound - guided biopsy in diagnosis of liver lesions

To the Editor,

In the diagnosis of focal liver lesions, percutaneous ultrasound guided fine needle biopsy is considered to be a safe, effective and accurate diagnostic procedure with a low rate of complications.

We estimated the sensitivity, specificity and predictivity of individual free hand and lateral probe guide approaches in 467 patients, average life span 63.0 ± 9.9 years, with ultrasonographically diagnosed focal liver lesions, who were admitted to the Department of Gastroenterohepatology, Clinical and Hospital Center "Bezanijska Kosa", Belgrade in the period 2008 – 2011. The estimated sensitivity for the approaches used in this investigation were: for free hand liver 91.4 % and for lateral probe liver biopsy 89.8%. Specificity for the free hand technique was 90.9% and for the lateral probe 90.5%. Positive predictive value (PPV) for the free hand technique was 94.9 % and the negative predictive value (NPV) was 63.8%, and for the lateral probe guide PPV was 96.9% and NPV 66.7%, respectively.

In the literature, the lower sensitivity of fine needle Trucut biopsy of hepatic metastases was estimated at approximately 86%, while specificity of this method attained approximately 100% and an overall accuracy of 88.5% in identifying liver malignancies [1]. Sensitivity varied according to factors such as blind versus guided aspiration, number of passes, operator skill, size, location and consistency of the lesion [2]. In our study, we did not face any complications, nor cases of needle tract seeding were detected. Other investigations also report a low level of complications regardless of the method of liver biopsy [4, 5].

In conclusion, the two methods targeted toward the focal liver lesions demonstrated a high level of compatibility that led us to the opinion that the definitive choice depends on the experience of the operators.

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Endoscopic ultrasound and pancreatic tuberculosis

To the Editor,

We read with interest the case series by Chatterjee et al on three cases of pancreatic tuberculosis that were diagnosed on endoscopic ultrasound (EUS) and fine needle aspiration. The authors concluded that endoscopic ultrasound is the diagnostic modality of choice for pancreatic tuberculosis facilitating high resolution imaging, as well as sampling of tissue for staining, cytology, culture and polymerase chain reaction assay [1]. Pancreatic tuberculosis is very rare and most commonly involves the head and uncinate process of the pancreas and its clinical and radiological findings often

mimic pancreatic malignancy [2-4]. Endoscopic ultrasound (EUS) is an accurate diagnostic modality for diagnosis of pancreatic lesions and we also had evaluated 6 patients of isolated pancreatic head tuberculosis retrospectively and compared their EUS findings with those of 25 patients with pancreatic head adenocarcinoma [4].

On EUS, a well defined hypoechoic mass lesion was noted in the head of pancreas in patients with pancreatic tuberculosis and none of these patients had any anechoic areas or calcification within the mass lesions. There was no difference in the EUS appearances of pancreatic tuberculosis and pancreatic adenocarcinoma. The mean diameter of the common bile duct was significantly greater in patients with pancreatic adenocarcinoma in comparison to patients with pancreatic tuberculosis (13.9 ± 2.6 mm vs. 8.88 ± 0.53 mm). Also the pancreatic duct was found to be dilated in 80% patients with pancreatic cancer whereas it was dilated in only one patient with pancreatic tuberculosis ($p < 0.05$). EUS fine needle aspiration could establish the diagnosis in all the patients with caseous material being aspirated in 2/6 (33%) patients. On cytological examination granulomas were noted in 5/6 (83.3%) patients and one patient had necrotizing inflammation. Acid fast bacilli were observed in 1/6 (16.6%) and culture for *M. tuberculosis* was positive in 1 of 2 patients (50%) tested.

In contrast to the case series by Chatterjee et al [1], where all three patients had intraabdominal lymphadenopathy none of our patients with pancreatic tuberculosis had significant peripancreatic, portal, celiac or mediastinal lymphadenopathy or ascites. On the contrary, two of our patients with pancreatic head adenocarcinoma had mediastinal lymphadenopathy with one of these patients having metastatic adenopathy whereas the other having co-existent tuberculous mediastinal lymphadenopathy. In conclusion, although none of the EUS features are distinctive for an accurate diagnosis of pancreatic tuberculosis, EUS FNA and tissue sampling for staining, cytology, culture and polymerase chain reaction assay can establish the diagnosis in the majority of cases of pancreatic tuberculosis and thus avoid unnecessary resections.

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Reply,

We thank Drs. Rao, Rana and Bhasin for their interest in our case series of patients with pancreatic tuberculosis. We agree that there are indeed no pathognomic endosonographic features that can differentiate pancreatic tuberculosis from pancreatic adenocarcinoma. Still, endosonography (EUS) has a special role in establishing the pre-operative diagnosis of pancreatic tuberculosis primarily because of its ability for tissue acquisition. Real time tissue elastography during EUS (as in patient I in our report) can also serve as another new parameter to help differentiate between these two conditions although more studies are needed for this. In our patient, EUS elastography demonstrated lymph nodes as heterogenous 'green' predominant without an elevated strain ratio thus pointing to an inflammatory rather than a malignant etiology.

As pointed out in your letter, we had also noted that Rana et al [1] did not document any significant peri-pancreatic or intra-abdominal lymphadenopathy in their case series, but lymphadenopathy has been noted in other recently published reports [2].

In summary, endosonography not only provides good quality imaging but is helpful in tissue acquisition and has a valuable role in the pre-operative diagnosis of pancreatic tuberculosis.

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Estimated prevalence of celiac disease in patients with osteoporosis and osteopenia in Yazd province (Iran)

To the Editor,

Whether patients with osteoporosis should be screened for celiac disease is controversial [1]. Estimations show that the prevalence of celiac disease is about 1/166 [2]. Recent data suggest a complex interaction between different cytokines and local or systemic factors involved in bone formation and resorption that cause metabolic bone disorder in these patients [3, 4].

In a case control study during June 2011-February 2012, we tried to detect the prevalence of celiac diseases among osteoporotic patients. Considering a study power of 85%, $\alpha = 0.05$ and based on previous studies that demonstrated prevalence of celiac disease about 0.6%, 100 patients were required for each group. Patients with history of using corticosteroids more than three months, using any drug that could decrease bone marrow density, malignancy, chemotherapy, paralysis or plegia and previously diagnosed celiac disease were excluded from the study.

A tissue transglutaminase test was performed in all patients using the ELIZA method. Patients whose tests were positive underwent endoscopy and biopsy of the second part of the duodenum. All samples were seen by one pathologist and diagnosis was confirmed or rejected. All registered data were transformed into the SPSS-15 program and analyzed by T-test and Chi-square tests.

Two hundred patients including 100 patients with osteoporosis (17 men and 83 women) (z-score <-2) and 100 healthy participants (14 men and 86 women) without osteoporosis were enrolled in the study. Mean age of the cases was 57.98 ± 9.3 and of the controls was 55.45 ± 8.7 . About 73.4% (61 patients) in the case group and 53.4% (46 participants) in the control group were menopausal women ($P=0.007$). Four patients in the case group had positive serologic results while in the control group there were no positive serologic tests ($P=0.04$). After endoscopy and biopsy only two female patients were confirmed for celiac disease.

The estimated 2% prevalence of celiac diseases in our study was similar to the Fojtík study in the Czech Republic [5]. Comparing with the estimated celiac prevalence of 0.6% in the Iranian normal population and despite the small sample size, our results confirm the need for celiac disease screening in osteoporotic patients who have no gastrointestinal symptoms.

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HIV/HCV coinfection in Romania - can we afford not to treat?

To the Editor,

An abrupt increase in the number of HIV/HCV coinfecting patients has been recently reported in Romania [1], a third of the 1989-2011 total cumulative number of cases being diagnosed in 2011, mostly in injecting drug users [2]. We conducted a pilot-study on 83 HIV/HCV coinfecting patients hospitalized in 2010/2011, HCV treatment naïve, which showed predominance of negative baseline predictors for hepatitis C evolution: HCV genotype 1 (98.8%); high baseline HCV viral load (>600,000 IU/ml in 53% of cases); advanced level of liver fibrosis (FIB-4 values >3.25 in 34.9% of cases, and in 52.2% of those severely immunosuppressed). Are these patients suitable candidates for HCV treatment?

Therapy should not be denied to any HIV/HCV coinfecting patient, but the decision to treat should be made on an individual basis, considering the following factors: a) sustained virological response is significantly lower in HIV/HCV co-infected patients than in mono-infected ones [3] and treatment determines numerous adverse effects; b) early initiation of combined antiretroviral therapy (cART) alone may prevent liver fibrosis' progression [4]. However, in our study most patients were late presenters, diagnosed in advanced stages of HIV infection, for which multiple cART regimens failed, due to low adherence. cART itself determines cumulative drug-induced hepatotoxicities, and, due to immune restoration, can paradoxically increase the degree of liver fibrosis; c) without HCV treatment, HIV coinfecting patients develop cirrhosis more frequently than those mono-infected [5]. As cART will improve the mean survival period of these patients, end-stage liver disease will become prevalent. This will further overload the national waiting list for HCV therapy, imposing severe financial burdens on the public health system [6]. Treatment of HCV infection not only determines regression of fibrosis, but can indirectly reduce progression of HIV infection, and implicitly decrease mortality rates, since HCV coinfection augments the development of AIDS-defining conditions, and diminishes the immune recovery [7].

Despite all the drawbacks, the benefits of both cART and HCV therapy, adjusted according to drug interactions and overlapping toxicities, outweighs the potential risks.

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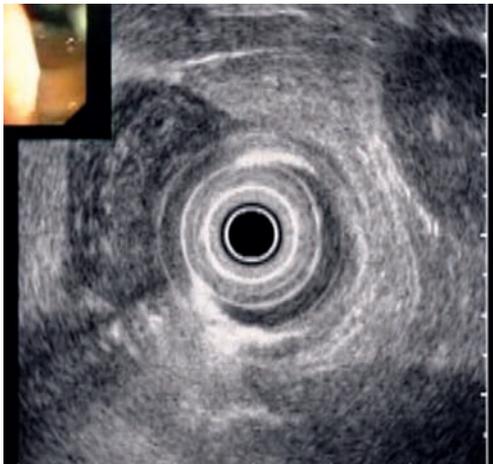


Fig 1. EUS aspect of GIST.

The role of EUS for accurate preoperative differential diagnosis between GIST and pancreatic rest

To the Editor,

In the last issue of *JGLD*, Trifan et al [1] presented a case of a young patient with gastric outlet obstruction

due to a submucosal tumour that was considered to be a gastrointestinal stromal tumor (GIST), for which a gastrectomy was performed and was proven finally to be a pancreatic rest.

Symptomatic (obstructive or haemorrhagic) submucosal tumors of the GI tract require surgery for relief of symptoms [2]. However, the differential diagnosis of the two entities is important in asymptomatic patients due to the different therapeutic approach: asymptomatic pancreatic rest is an innocent lesion that can be followed-up, while for asymptomatic GIST, surgical treatment is recommended with complete gross resection including pseudocapsula [3]. Resection for asymptomatic GIST is mandatory in tumors ≥ 2 cm or with „high risk” EUS features (irregular border, cystic spaces, ulcerations, echogenic foci, heterogeneity) [4].

Endoscopic identification of a gastric subepithelial lesion that raises the suspicion of a pancreatic rest (50% of them appear as antral submucosal nodules with a central umbilication) should be followed by EUS [4-6]. EUS, even unspecific for a positive diagnosis, is able to differentiate GIST from pancreatic rest. Most GISTs originate within the muscularis propria (4th layer of the gastrointestinal tract wall) (Fig. 1), although small lesions may rarely originate within the muscularis mucosae (2nd layer), while pancreatic rest commonly arises from the 2nd and 3rd layer (submucosa), and rarely from the 4th one. Despite the fact that both subepithelial tumors are hypoechoic, their homogeneity differs: pancreatic rest is heterogeneous (because of glandular cells and ductal structures), with indistinct margins, GIST is usually homogeneous, with well-defined margins (it can be rarely inhomogeneous due to liquefaction necrosis, cystic and hyaline degeneration).

CT findings may also help to differentiate pancreatic rests from other submucosal lesions, although small lesions may be missed on a CT scan [7].

In the last 2 years, we observed 18 cases of submucosal tumors diagnosed by EUS; only 3 of them were pancreatic rests. Twelve out of 15 GISTs required surgery.

In conclusion, the differential diagnosis between GIST and pancreatic rest can be made by EUS, which is considered to be the most accurate imaging test for the positive and differential diagnosis in this setting.

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Improvement of gastroesophageal reflux in patients with obstructive sleep apnoea treated with continuous positive airway pressure

To the Editor,

Gastroesophageal reflux (GER) is a common condition characterised by heartburn and regurgitation caused by the reflux of gastric contents into the esophagus [1]. Obstructive sleep apnoea-hypopnoea syndrome (OSAHS) is a disorder characterised by repetitive sleep-induced pharyngeal collapse, with airflow ceasing despite a continued respiratory drive [2]. Patients with OSAHS have a high frequency of GER that ranges from 54% to 76% [3] not only in the number but also in the length of overnight GER episodes [4]. We prospectively studied 337 patients diagnosed with OSAHS between March, 2008 and March, 2011, at the University of Medicine in the Ioannina Sleep Disorders Centre. All patients had been referred for a polysomnography for evaluation of OSAHS, and immediately before the initial visit, patients were asked to fill out a questionnaire regarding sleep-related symptoms.

Of the 337 patients with OSAHS, 143 presented GER and OSAHS (42.4%) and finally 77 (53.8%) of them came for

follow-up after 6 months; 58 (75%) reported amelioration of GER symptomatology and 19 (25%) reported insignificant or no amelioration despite the use of a nasal CPAP (nCPAP) apparatus at home. There was a strong correlation between CPAP pressure and improvement in AHI score (correlation, $r = 0.73$; $p < 0.001$).

The major findings of this study were as follows: a net amelioration of GER occurred using a nCPAP apparatus; patients with higher BMI values were more susceptible to develop GER and OSAHS; nCPAP use improved the occurrence of arrhythmias during sleep, and males with OSAHS and GER predominated with a M:F ratio 4:1.

The reasons for this strong association are not completely understood. It is evident that obesity predisposes to both conditions. We found a correlation between the severity of OSAHS and the severity of GER. This could be explained by OSAHS worsening GER, by GER precipitating apnoeic events through microaspiration and producing laryngeal inflammation and edema or by a vagal-mediated reflex.

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