Current practice for upper gastrointestinal endoscopy: a multicentre study in Lazio, Italy

To the Editor,

Esophagogastroduodenoscopy (EGD) is largely used in clinical practice. Different international guidelines advised some actions to improve this endoscopic examination, including an adequate sampling of gastric mucosa for both Helicobacter pylori (H. pylori) diagnosis and detection of precancerous lesions to evaluate gastric cancer risk [1]. Therefore, assessing current EGDs practice, including pre-, during, and post-procedure measures, is relevant to identify potential aspects to be implemented. With this aim, we designed this multicentre study on EGD practice in 8 endoscopic centres in Lazio, an Italian region with 5,709,263 inhabitants in 2022.

Clinical, endoscopic, and histological data of consecutive patients referred for UGIE in the participating centres between March 1 and March 31, 2022, were anonymously reviewed. An adequate gastric mucosa sampling was considered to be accomplished when at least two antral and two gastric body biopsies were collected in two different vials beyond endoscopic lesions, as suggested [2, 3].

A total of 912 patients (male 399; mean age: 58.7 ± 15.4 years) underwent EGD for any reason in the 8 participating centers. There were 52 endoscopists involved in the centers (median: 6; range: 2-12), and the median number of endoscopic examinations performed per center was 111 (range: 51-168). Regarding the pre-procedure questions, information on first-degree upper gastrointestinal cancers was lacking in 619 (67.9%) cases, and smoking habits were uninvestigated in 634 (69.6%) cases. Data on previous H. pylori eradication, ongoing proton pump inhibitor (PPI) therapy, and ongoing anti-thrombotic therapy were not collected in 605 (66.4%), 437 (48%), and 195 (21.3%) patients, respectively. No sedation was administered to 277 (30.4%) patients. Before endoscopy, no gastric cleaning preparation was given in any of the centers.

Concerning the intra-procedure phase, an image-enhanced endoscopy technique was applied in only 14 (1.5%) cases. Overall, adequate gastric biopsy sampling was achieved in 426 (46.7%) cases, at least one biopsy in further 241 (26.4%), while no biopsy was performed in 245 (26.9%) EGDs. In detail, the rate of standard gastric mucosa sampling ranged from 20% to 82.3% (p<0.001) in different centres, with 25% in one, 26% in another, and 30% in the remaining centres.

![Fig. 1. Percentage of adequate gastric mucosa sampling performed by the 33 gastroenterologists who executed ≥10 endoscopies during study period.](image-url)
50% in four, 51% to 75% in one, and >75% in the remaining two. Similarly, it widely varied among endoscopists from only 5% to 100% (p<0.001) (Fig. 1). Overall, the rate of adequate gastric biopsy sampling did not differ between patients aged 50 or older and the ones younger (117/237, 49.4% vs. 309/675, 45.8%; p=0.3) nor between the first and subsequent endoscopic examinations (172/366, 47% vs. 309/675, 45.8%; p=0.1).

Our investigation revealed some relevant gaps in both the pre-procedure phase and the endoscopic examination. In detail, information on the first-degree history of upper gastrointestinal cancers or smoking habits, that is two independent factors of gastric cancer, was not collected in more than 30% of cases. Moreover, data on therapy with PPIs was not enquired in as many as half of the patients, although their current use reduces the detection of both H. pylori infection and endoscopic lesions, including gastric cancer [4, 5].

Regarding the procedural phase, more than half of the endoscopists involved in the study routinely performed an adequate (antral plus gastric body) sampling of gastric mucosa in less than 50% of EGDs, with some operators performing this procedure in only 5% of EGDs. Furthermore, we discovered that the rate of correct gastric sampling did not differ between patients under or over the age of 50, nor between those who had their first or subsequent examination.

In conclusion, our study showed that the quality of EGD deserves to be urgently improved in different aspects.

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Conflicts of interest: None.

DOI: 10.15403/jgld-4876

REFERENCES


Prevalence of hepatitis B and C virus infection in a Roma Population in Cluj County, Romania

To the Editor,

In Romania the prevalence of hepatitis B (HBV) and C virus infection (HCV) is 4.4% and 3.23% respectively. New data modelling forecasting reveals a descending trend in the prevalence of HBV and HCV infections to 1.05%, respectively 1.66% [1-3]. The Let’s End HepC (LEHC) project investigated the dynamics of epidemiology of HCV in Romanian risk groups that are characterized by higher occurrence densities [4]. The LEHC tool allowed the quantitative evaluation of public health policies’ impact, for every year until 2030, in five population groups: people who inject drugs, prisoners, individuals who have received blood products, children at risk for vertical transmission, and the remnant population. It estimated an anticipation of the HCV elimination year in Romania to be 2026 if the twenty-four health policies from this project are fully implemented and consistently maintained over the years. However, in Romania, there are no published data focusing specifically on the prevalence of hepatitis B and C virus infection in the Roma population, to our knowledge.

The HepOut screening campaign was carried out in September-October 2022 and consisted of testing for HBV, HCV and human immunodeficiency virus (HIV) in the underserved population in two predominantly Roma ethnic communities in the Cluj County. The testing was carried out in an adequately equipped mobile medical office, where the participants received proper counseling, information and privacy, after signing an informed consent form and completing a document regarding risk factors screening. The testing consisted of point of care rapid tests: HBs Antigen, anti HCV Antibody and dual HIV-1/2 Ag/Ab combo from Abbot Diagnostics.

Inclusion criteria were patients that signed the informed consent, agreed to blood collecting and fully completed the risk factor form. Exclusion criteria were patients that did not present an official ID, unaccompanied minors and lack of consent.

There were 295 patients tested, with 259 being from Pata Rat (suburb of Cluj-Napoca) and 36 from the Cojocna (village in Cluj County) communities. Of these, there were 53 children (aged between 5 and 17 years), 160 women (aged between 18
and 73 years, median age of 42.92 years) and 82 men (aged between 18 and 72 years old, median age of 48.03 years).

The total of HBV positive patients was 14 patients (9 females and 5 males) of which 6 were newly detected cases. The prevalence of HBV in the total studied population was 4.75%. The 6 newly detected HBV patients were aged between 28 and 48 years old and shared common risk factors such as unprotected sexual contact, multiple dentistry interventions and tattoo practices. The prevalence for HBV females was 3.05% while the males had a prevalence of 1.69%.

There were 6 total HCV cases with positive test, 4 females and 2 males of which only one adult male had the infection status previously unknown. The total prevalence for HCV was 2.03%. The HCV patients displayed an age distribution between 35 and 64 years of age and none could identify the mechanism of infection, albeit confirming exposure to risk factors. The prevalence for the female HCV population was 1.36% and 0.68% for HCV positive males.

No HIV infection in adults and children from the Roma population was found.

There were no children detected with a positive test, which indicates a satisfactory immunization coverage and low vertical transmission rates.

In Central and Est Europe, the prevalence of HBV infections is much higher in the Roma population than in the general population (2 to 4-times higher), compared with the prevalence of HCV infection where the prevalence rate is similar to the general population [5]. Our data suggests that the European and national trend of a higher VHB prevalence than HCV is maintained in the case of the Roma minority from Cluj County [5]. However, the total prevalence of HBV infection in the studied Roma population is much higher than the prevalence in the general non-Roma Romanian population (4.75% compared to 1.05%) [3]. On the other hand, there is a moderately higher HCV infection prevalence in the Roma population compared with the general population (2.03% vs. 1.66%) [3].

In order to achieve the World Health Organization elimination targets for 2030 [4], the Roma population should be considered a high priority group in managing viral hepatitis.

To the Editor,

A 55-year-old woman with a personal and family history of familial adenomatous polyposis (FAP) in 1992 had undergone a prophylactic colectomy with ileal pouch-anal anastomosis. She had no further symptoms and avoid further endoscopic surveillance despite recommendations. In 2000 years, the family received the diagnosis of a mutation in the Adenomatous Polyposis Coli (APC) gene namely c.1629del; p.(Ile544Leufs*5).

In February 2020, the patient underwent an abdominal ultrasound for dyspepsia. Multiple hepatic nodules were found, the largest of 45 mm in the V segment. An endoscopic evaluation was performed with evidence of a 30 mm ulcerated non-polypoid lesion of the pouch and biopsy samples were taken (Fig. 1a). A total body computed tomography (CT) scan confirmed the presence of numerous liver and abdominal lymph nodes metastasis. Histologically, a neoplastic epithelial (pancytokeratin+, dot like) small cells population was documented, growing in sheets and nets (Fig. 1b), with necrosis, and neuroendocrine (synaptophysin+, chromogranin+) immunophenotype (Fig. 1c) with a proliferating index (% of cells Ki67+) of 90% (Fig 1d), configuring neuroendocrine carcinoma (NEC) small cell type.

After a multidisciplinary consultation, the patient started chemotherapy with cisplatin and etoposide with an initial therapeutic response (reduction of hepatic lesions) but the development of anemia and the need of blood transfusions led to the suspension of any treatment.

In August 2020 the patient was hospitalized for intestinal sub-occlusion and underwent a CT scan that showed disease progression with the appearance of peritoneal and cerebral metastases. A second-line chemotherapy with folic acid, fluorouracil and oxaliplatin was attempted without clinical improvement. In November 2020, in consideration of the

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A metastatic neuroendocrine carcinoma of ileal pouch in a woman with familial adenomatous polyposis

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Conflicts of interest: None.

Acknowledgement: The authors thank all doctors, nurses and students who were involved in this campaign campaign and to Gilead company for financial support.

DOI: 10.15403/jgld-4931
further progression of the disease, the deterioration of the general conditions and the absence of valid therapeutic alternatives for the histology type of the disease, no further treatments were attempted. The patient died in December 2020.

Familial adenomatous polyposis is a rare autosomal dominant disease characterized by numerous adenomatous polyps of the colon and rectum, a 100% lifetime risk of colorectal cancer and a variety of extraintestinal manifestations. Germinal pathogenic variants encompassing the APC gene are mainly responsible for this syndrome. APC gene encode for a 312 kDa protein with a fundamental role in many cellular processes, through the Wnt signalling pathway [1].

Prophylactic colectomy with ileal pouch-rectal or anal anastomosis is a common surgical option for patients with FAP [2]. However, adenomas may develop in the remaining gastrointestinal tract. In patients with FAP the incidence of adenomas in the ileal pouch ranged from 6.7 to 73.9% and this data varies in relation to the age of the pouch [3]. In the ileal pouch the progression from a dysplastic lesion to an invasive carcinoma occurs in less than 1% of patients [4].

Gastrointestinal neuroendocrine neoplasms (GI-NENs) are a heterogeneous group that represents about 1-2% of all digestive malignancies. Most of GI-NENs arise in the small intestine (45%) and the ileum is the most common location. About 20% of NENs are connected with hereditary genetic syndromes associated with pathogenic variants in MEN1, DAXX, ATRX, TP53 or RB1 [5].

In the most recent World Health Organization (WHO) classification, GI-NEN are classified in well differentiated neuroendocrine tumors (NETs) and poorly differentiated NECs, based on both morphological and proliferative features. Unanswered questions remain the role of genetics and epigenetics on the biological behavior of the tumor and the patient’s outcome [6].

To the best of our knowledge, this is the first case of NEC, small cell type, arising in ileal pouch of a patient with FAP. Also considering the most recent classifications and their meaning, further epidemiological research and the characterization of the germline and somatic landscape will serve to support or refute the possibility of the association between NENs and FAP, and as well as possible therapeutic targets.

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Conflicts of interest: None.
DOI: 10.15403/jgld-4839

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Pancreatic pseudocyst (PPC) is a localized fluid collection surrounded by a wall of fibrous tissue that is not lined by epithelium. Pancreatic pseudocysts are seen both in acute and chronic pancreatitis. Regardless of the etiology of the pseudocyst, the incidence is low, 1.6%-4.5%, or 0.5-1 per 100,000 adults per year [1].

Currently, endoscopy plays a major role in the management of PPC with the introduction of endoscopic ultrasound-guided cystogastrostomy (EUS-CG), which allows the drainage of pancreatic fluid collections. This method has been increasingly facilitated over the years by the lumen-apposing metal stents (LAMS) that are short, fully covered, self-expanding stents with a large diameter and both proximal and distal anchor flanges [2]. Electrocautery-enhanced (“hot”) LAMS have now largely replaced the older “cold” version due to their simplicity of use (by obviating the need for multiple procedural steps). This procedure is performed under deep sedation with anesthetic assistance.

The combined performance of laparoscopic cholecystectomies (LC) and cystogastrostomies has been described in the literature [3]. However, the gold standard for PPC drainage is the use of EUS [4], and, to date, the combined use of EUS-CG with LC has never been described.

In this case report, we would like to report the experience of our center with a patient who underwent EUS-CG and then LC in the same operating session.

A 78-year-old man with a history of acute biliary pancreatitis developed a pseudocyst of the pancreatic head of about 20 cm. A combined operating session was scheduled. An EUS was first performed, which confirmed the presence of a pancreatic pseudocystic formation, and a LAMS of 10x10 mm was placed (Hot Axios, Boston Scientific, Marlborough, Massachusetts, USA) (Figs. 1a and 1b) with the aspiration of approximately 2 liters of brownish liquid material. Subsequently, the surgical procedure was performed. The total duration of the EUS-CG and LC was approximately 100 minutes. No short or long-term complications were described. After about 4 weeks the LAMS was removed in the absence of complications (Figs 1c and 1d).

There are many advantages of performing combined surgical/endoscopic procedures. First, combined EUS-CG and LC is a less invasive and shorter procedure. Second, there is a reduction in hospitalization days and anesthesiologic risk associated with multiple anesthesia. Therefore, the patient satisfaction increases, and costs are reduced.

One of the major concerns related to the combined use of EUS-CG and LC is the hypothetical LAMS migration due to laparoscopy-induced pneumoperitoneum. In our experience, despite the fistula between the stomach and PPC was no yet consolidated, the new endoscopic devices allowed solid anchorage, thereby substantially reducing the risks of migration.

Another critical issue may be related to the insufflation of the stomach that could affect the laparoscopic procedure. However, the use of CO₂ versus air during the endoscopic procedure allows its rapid disposal and, in our experience, did not hinder the laparoscopic procedure.

Fig. 1. a and b: Endoscopic ultrasound-guided cystogastrostomy. c and d: Endoscopic removal of LAMS
In conclusion, EUS-CG in the same operating session of the LC has proven to be safe and efficient without hindering the surgical procedure.

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Conflicts of interest: None.
DOI: 10.15403/jgld-4633

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