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Correspondence

Underwater endoscopic mucosal resection of a large jejunal polyp by single-balloon enteroscopy in a patient with Peutz–Jeghers syndrome

Dear Editor,

We read with great interest the article by Elli et al. [1] that reported a case of duodenal polypectomy in the context of an atrophic coeliac disease mucosa by using the underwater endoscopic mucosal resection (UEMR) technique, first described by Dr. Binmoeller et al. [2] for flat colorectal lesions.

During UEMR, the lesions, in a lumen filled with water, rather than gas, float away from the deeper mucosal layers, resulting in an easier capture by a polypectomy snare. Endoscopic ultrasound shows that, in such situation, the muscularis propria does not change its circular configuration and does not follow the changes of the mucosa and sub-mucosa, even during peristaltic contraction.

UEMR has also recently been reported for removing polyps in the terminal ileum during ileo-colonoscopy [3]. Interestingly, a similar approach by using enteroscopy for removing lesions located in the jejunum or in the ileum has not been specifically reported so far.

In patients with Peutz–Jeghers syndrome (PJS) with polyps located deep within the small-bowel, surgical intervention used to be the only viable therapeutic option for treating bleeding, obstruction or intussusception caused by these lesions, before device-assisted enteroscopy (DAE) was introduced into clinical practice. Nowadays, DAE endotherapy currently offers an effective alternative to major surgery and often represents the preferred option for treatment of small-bowel pathology [4]. Therapeutic interventions during DAE are however technically demanding, given the long (2 m) enteroscope. Also, therapy by DAE is often made more challenging by atypical small-bowel looping and a relatively unstable enteroscope position. In addition, given that the small-bowel wall is particularly thin (only up to 3 mm in thickness), one should be particularly careful to avoid perforation when applying endotherapy within the small-bowel [5]. Although DAE has been shown to be clinically useful for diagnosis and for therapy of small-bowel polyps in PJS patients [6], one must also consider that bleeding and perforation are more commonly associated with therapeutic interventions, such as polypectomy (up to 10%, when large polyps are resected en-bloc) [5].

We here present the case of a large jejunal polyp removed by UEMR during a single-balloon enteroscopy. A 21 year-old woman affected by PJS (heterozygous deletion of LKB1 gene on exon 6) had undergone endoscopic polypectomies since the age of 6 months, throughout all the gastrointestinal tract. In 2017 a capsule endoscopy examination revealed at least 5 newly formed polypoid lesions (diameter between 2 and 5 cm) from proximal jejunum until the mid ileal loop, as confirmed by a subsequent MR enterography. A single-balloon enteroscopy (SIF q 180 p, Olympus Medical Systems, Hamburg, Germany) under general anesthesia was performed and showed a sessile lesion about 4 cm in diameter in a narrow loop of the bowel, 30 cm beyond the ligament of Treitz. A conventional EMR was attempted at first, but the submucosal injection of an hydroxyl-propyl-methyl-cellulose solution was followed by an inadequate lifting of the lesion. In order to overcome the technical challenge of size and localization of the lesion (narrow lumen, acute angle of the bowel), we decided to perform UEMR. Before starting UEMR, all insufflated gas (CO_2) was aspirated, then the lumen was filled with water (about 1 l) with an infusion pump. The water immersion ensured adequate visualization of the entire polyp morphology and especially of the base of the polyp (Fig. 1), which was then en-bloc resected with a 30 mm polypectomy snare (Captivator II, Boston Scientific, Marlborough, MA, USA), (Fig. 2). Two prophylactic clips (Resolution Clip, Boston Scientific, Marlborough, MA, USA) were placed and a tattoo with sterile ink was performed next to the scar. The polyp was retrieved for histological examination. No immediate or delayed adverse events occurred. During the same procedure, three more distal pedunculated polyps,

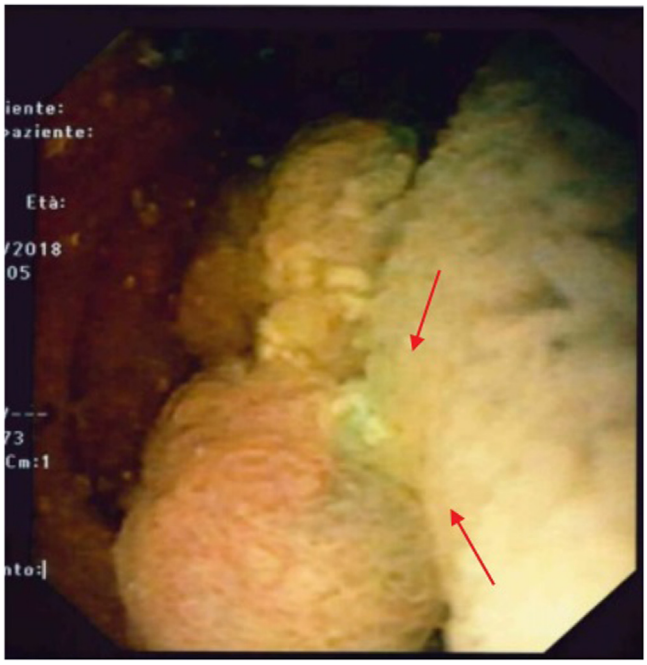

Fig. 1. Filling-up the lumen with water allowed adequate visualization of the base of the polyp (arrows).

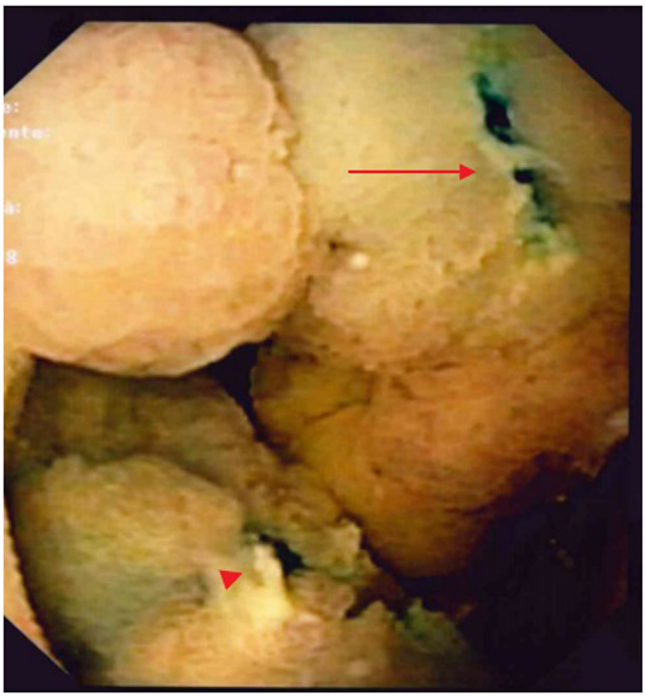

Fig. 2. En bloc resection of jejunal polyp using the underwater EMR technique was successful without any adverse events (Head arrow: regular eschar. Arrow: removed polyp).

with a diameter between 2 to 4 cm, were removed by conventional EMR. Histological examination of the resected specimen (Fig. 3) revealed a hamartomatous polyp with clear margins (R0 resection).

Compared to conventional EMR, the underwater technique shows some advantages: an increased rate of en-bloc resections, a reduction of adverse events due to reduced distention of the bowel lumen, an easier approach to lesions in difficult positions [7]. UEMR seems to have the same safety profile as the conventional EMR [7] but this has still to be further confirmed by randomized trials. In the small-bowel, as in the upper and in the lower GI tract, submucosal injection of the mucosa is a fundamental part of EMR in order to reduce the risk of perforation and bleeding. However, because of the small diameter of the small-bowel lumen, injection of a large volume of lifting solution should be avoided, in order to leave enough space for an easy and effective snare placement [5]. Therefore, in agreement with recent reports of UEMR of large colonic polyps in difficult locations [7], we used a "hybrid technique" since the submucosal injection in the small-bowel could not guarantee a safe and complete capture by the snare.

To our knowledge, this is the first case reported of UEMR of a Peutz–Jeghers polyp performed during DAE. UEMR appears to be a promising tool for removing jejuno-ileal polyps during DAE, especially for lesions in difficult positions. In our case, the jejunal UEMR was safe, well tolerated and effective. We achieved a complete (R0) resecti on, even if Peutz–Jeghers polyps are usually non-neoplastic.

Conflict of interest

None declared.

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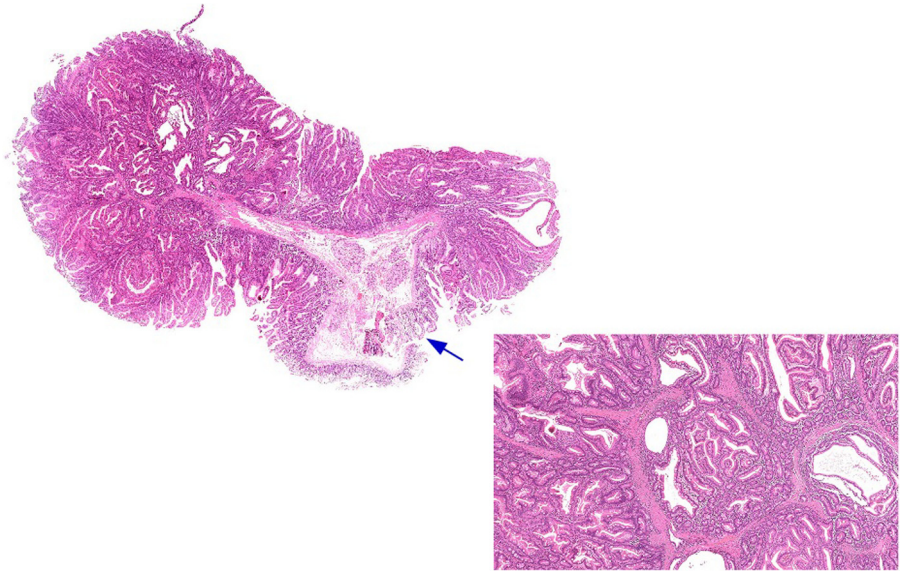

Fig. 3. The polyp is composed of smooth muscle fibers arranged in an arborizing pattern, surrounding a hyperplastic glandular mucosa; the mucosa shows columnar and goblet cells at the surface, and Paneth and neuroendocrine cells at the base. Among the hyperplastic mucosa and the smooth muscle branches lies a connective stroma. These histologic features are diagnostic of a Peutz–Jeghers polyp (hematoxylin and eosin stain, original magnification ×12.5, detail ×50). No evidence of lesion on the margin, therefore, defined as negative margin (blue arrow).

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High prevalence of acute onset autoimmune hepatitis in males: A real-life cohort from Northern Italy

Dear Editor,

We have read with great attention the paper from Muratori et al. [1] which evaluated the clinical and prognostic implications of acute onset autoimmune hepatitis (AIH) in a large multi-centric database including 479 patients (381 females and 98 males) with AIH from three Italian tertiary liver centers. Clinical presentation of AIH was defined as "acute" when transaminases reached as high as at least 10 times the upper normal limit (10× UNL) and/or serum bilirubin was greater than 5 mg/dl at the time of diagnosis. In absence of such a clinical profile at presentation AIH was judged chronic/asymptomatic. According to those criteria, the authors identified 204 patients with acute onset (43%). AIH diagnosis was based on liver histology in 298 patients (62%). The grading and staging of the disease were assessed by the Ishak score with cirrhosis diagnosis staged S5-6. In Muratori et al.'s study males and females had a similar rate of acute onset AIH (38% vs. 44%, NS). At diagnosis, patients with acute onset had significantly higher transaminases levels and serum bilirubin, while showing a significantly lower level of albumin and a more prolonged INR. By contrast, a lower rate of cirrhosis in acute onset AIH was found as compared to the group without acute onset. Despite the response to immunosuppressive therapy was similar in both groups of patients (66% vs. 57%, NS) the authors concluded that the acute presentation would have a better long-term prognosis.

As underlined by the authors in their study, AIH is an extremely heterogeneous disease with a large spectrum of clinical presentations in terms of gender, severity of disease and response to immunosuppressive therapy, probably related to a different genetic background [2,3]. Stimulated by this interesting paper evaluating the clinical implications of a symptomatic acute vs. a chronic/asymptomatic onset of AIH, we would like hereby to report on a "real-life" series of Italian male patients with AIH, consecutively enrolled in five liver centers in northern Italy between 2000 and 2016.

We have applied the same diagnostic criteria used by Muratori et al. [1] in order to classify our cohort of consecutive male patients. Non-response or incomplete response to immunosuppressive therapy was defined as abnormal liver function e/o IgG levels in spite of standard therapy at 48 weeks.

A total of 93 males (91 Caucasian) have been enrolled and followed up over a median number of 4.6 years (range 1–18.1 years). Eighty-eight patients (95%) had a liver biopsy available showing a diagnosis of AIH. The patients' median age at enrollment was 54 years (17–79), their median BMI at diagnosis was 24 kg/m^2 (range 19–42 kg/m^2). The IAHG score [4] was calculated for 80/93 patients (86%) and ranged from 10 to 19. Extra-hepatic autoimmune disease was observed in 22 patients (24%). Serum autoantibodies were positive in 80 patients (86%) as follows: ANA in 73 (78%), SMA in 27 (29%), LKM-1 in 1 (1%), AMA in 4 (4%). Forty-eight patients (53%) showed increased serum IgG levels at diagnosis. Twenty-two out of 88 patients (25%) had cirrhosis at baseline and 5 (4%) presented with ascites.

The acute onset was observed in 55 (59%) patients with 23 of them (42%) showing serum bilirubin values >5 mg/dl and 54 (98%) transaminase levels >10× UNL. The prevalence of cirrhosis at baseline was similar between the patients with acute onset (25%) and those without acute onset (21%).

At diagnosis, 89 patients were administered steroids (96%), and 4 started therapy with azathioprine alone; 43 received both drugs (46%). Complete response to therapy was achieved in 93% of patients at week 48. Only 9 patients (10%) completely withdrew from steroids and/or azathioprine.

In our population the progression to cirrhosis during follow-up was observed in only 3 patients (3%), of whom two with acute onset.

We have concluded that in our cohort of males with AIH, a higher rate of acute presentation was observed as compared with the data reported by Muratori et al. (59% vs. 38%, respectively). Moreover, an extremely favorable outcome of the disease in terms of both response to the immunosuppressive therapy and clinical progression rates was detected over time. Such preliminary data suggest a potential change in clinical and epidemiological profiles of this autoimmune disease and need validating by larger case control studies including both males and females.

Conflict of interest

None declared.

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