

Combined laparoscopic–endoscopic resection of a bleeding giant duodenal Brunner’s gland hamartoma

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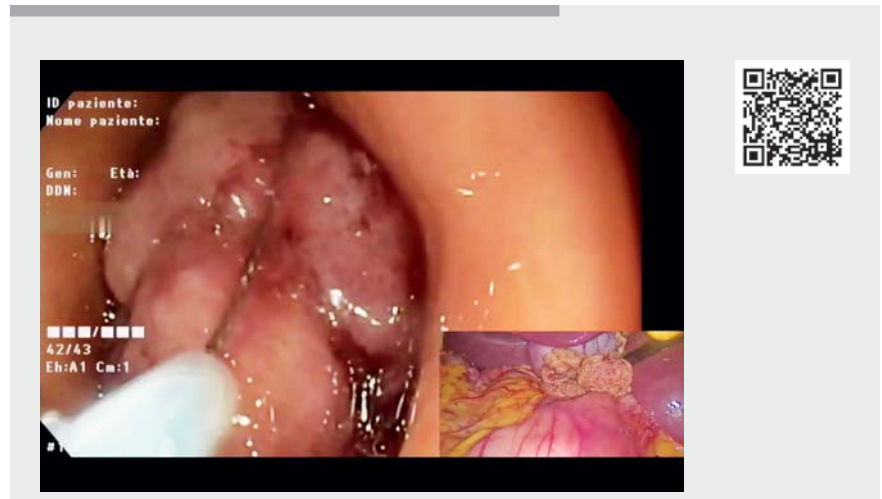


► **Fig. 1** Computed tomography image showing the large duodenal polyp (arrow).

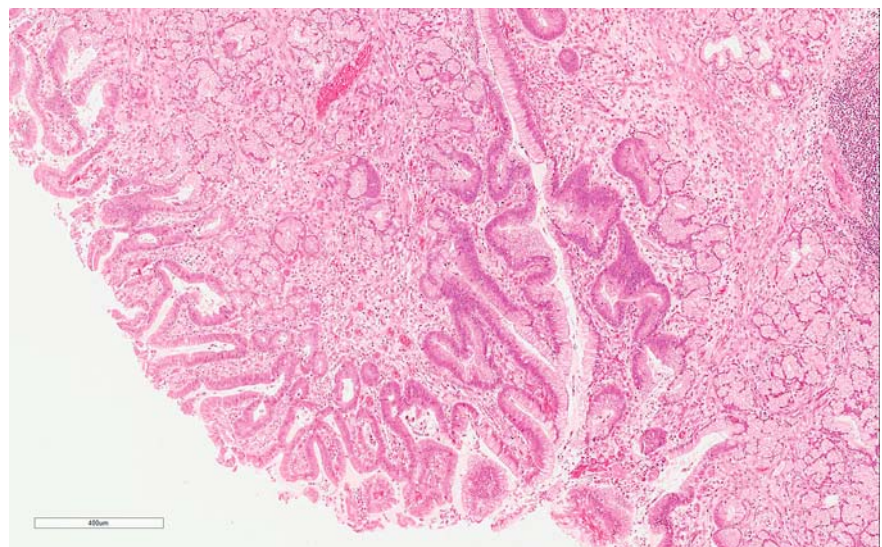


► **Fig. 2** Macroscopic appearance of the specimen, which measured 50 × 35 × 15 mm.

Brunner’s gland hamartoma is a rare entity and constitutes 10.6% of all benign duodenal tumors [1]. In symptomatic patients, endoscopy represents the first-line treatment; however, there are many technical challenges that can limit endoscopic removal, including the size and location of the lesion. Therefore, surgery may be required for complex cases [2, 3]. We present the case of a healthy 41-year-old woman who presented with melena. Upper gastrointestinal endoscopy and computed tomography scanning revealed a large polyp with ulceration on the anterior wall of the duodenal bulb (► **Fig. 1**). Endoscopic ultrasonography confirmed a hypoechoic submucosal



► **Video 1** Laparoscopic-assisted polypectomy of the giant Brunner’s gland hamartoma.



► **Fig. 3** Microscopic section stained with hematoxylin and eosin (magnification ×10) showing a lining epithelium of atypical cells (probably dysplastic), stromal edema, and mild vascular congestion in relation to the Brunner’s glands.

pedunculated polyp with a 10-mm base and 50-mm head. No malignancy was revealed on biopsy. Initially, a standard polypectomy was attempted but the head of the lesion was too large to pass through the pylorus. Therefore, a combined laparo-

scopic–endoscopic approach was planned (► **Video 1**). During the laparoscopic exploration of the abdominal cavity, the duodenal polyp with full endophytic growth was recognized. Even with laparoscopic assistance, passage of the lesion into the stomach was not possible.

Therefore, a 15-mL epinephrine solution (diluted 1:20000) was injected into the head of the polyp to achieve volume reduction and reduce bleeding [4]. Next, the head of the lesion was pushed into the stomach by gently pressing the laparoscopic forceps along the duodenum towards the pylorus, and piecemeal resection of the head was carried out; the polypectomy was completed with the en bloc removal of the peduncle and all of the fragments were collected (► Fig. 2).

The total operative time was 80 minutes. The patient's postoperative course was uneventful. Pathology confirmed the lesion was a duodenal Brunner's gland hamartoma (► Fig. 3). No recurrence was detected at the 6-month follow-up endoscopy.

In the present case, the application of laparoscopy overcame the polyp size-related constraints, allowing endoscopic resection; the combined approach provided a safe and curative therapeutic strategy, avoiding a more invasive surgical treatment.

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Competing interests

C. G. De Angelis is a consultant for Boston Scientific, Olympus, and Medi-Globe. A. Marano, M. Sacco, L. M. Rorato, S. Caronna, F. Di Giovanni, and M. Santarelli declare that they have no conflicts of interest.

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