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Endoscopic Resection of Large Gastric Polyp in a Patient with Peutz-Jeghers Syndrome: A Case Report

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ABSTRACT

Gastric polyps (GPs) are luminal lesions protruding from the mucosa and are incidentally discovered in approximately 2% of esophagogastroduodenoscopies (EGDs). Most patients are asymptomatic and rarely develop complications such as bleeding or gastric obstruction. Peutz-Jeghers syndrome is a low-incidence polyposis characterized by the combination of mucocutaneous pigmented lesions and hamartomatous gastrointestinal polyps. Herein, we present a case of a 24-year-old female patient with Peutz-Jeghers syndrome who underwent endoscopic resection of a large gastric antral polyp as an alternative to invasive surgical intervention.

Key words: gastric polyps, Peutz-Jeghers syndrome, endoscopic resection, hereditary polyposis syndrome, polypectomy

INTRODUCTION

Gastric polyps (GPs) are luminal lesions protruding from the mucosa and are incidentally discovered in approximately 2% of esophagogastroduodenoscopies (EGDs). Most patients are asymptomatic and rarely develop complications such as bleeding or gastric obstruction (1).

There are different types of GPs, and their endoscopic appearance may be related to malignant potential. However, histopathological characterization will determine the neoplastic potential or the degree of malignancy of the polyps (2).

It is known that the majority of polyps found during endoscopy correspond to hyperplastic polyps. Series report up to a 75% frequency of this histological type, especially in areas with a high prevalence of H. pylori infection (3). Other factors associated with their appearance include chronic atrophic gastritis,

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pernicious anemia, or reactive chemical gastritis. Conversely, in areas with a low prevalence of H. pylori, there is a higher incidence of fundic polyps, related to the indiscriminate use of proton pump inhibitors in the population. However, both hyperplastic polyps and fundic polyps are poorly associated with the risk of developing malignant neoplasms, except when the latter are found in the context of a patient with familial adenomatous polyposis (4).

In these cases, polyps are often multiple when associated with familial adenomatous polyposis (FAP) or Peutz-Jeghers syndrome, and they are found in a relatively younger population. There are reports of adenocarcinoma derived from fundic polyps in patients with FAP. Alteration of the β-catenin gene is found in 91% of patients, and these patients have a higher risk of colon polyps, adenomas, and adenocarcinomas compared to the control group (5).

CLINICAL CASE

This concerns a 24-year-old female patient with a history of Peutz-Jeghers syndrome diagnosed a year ago. Surgical history includes tonsillectomy at one year of age, resection of an epidermoid cyst five years ago, conservative management of a left foot first toe fracture one year ago, denies chronic medication intake, positive history of blood transfusion at two years due to anemia without reactions, no known allergies.

Her current condition began approximately one year ago with the presence of dyspepsia and melena, which, combined with the recent diagnosis of Peutz-Jeghers syndrome, led to a decision to perform panendoscopy, revealing a large polyp in the gastric antrum, followed by a subsequent routine colonoscopy due to underlying pathology.

Endoscopy

Mucosa in the stomach, all segments present mild hyperemia in patches predominantly antral, from the body, a large polypoid lesion is observed, approximately 10 cm multilobulated with an adenomatous appearance, with minimal bleeding, mild superficial chronic gastritis.

Histopathology

Report (HRP) folio 05432-23 30.10.23: referred as gastric antrum biopsy findings consistent with hyperplastic polyp, no data of hamartomatous polyp are observed in this material (papillary/velvety architecture, epithelial component with nodular configuration separated by septa composed of smooth muscle).

Colonoscopy

A lesion is observed in the ileum with multiple sessile polypoid lesions of 3-4 mm, with mild changes in mucosal pattern, ileal polyps Boston classification: CD 1, CT2, CI3.

Ileal polyps, fragments of ileal mucosa without significant histological alterations, no polyps are observed in this material.

Therefore, it was decided to inform the patient about therapeutic options, including endoscopic polypectomy, as well as the risks and benefits, which were accepted, and the procedure was performed on 30.04.2024 with excision of the lesion by polypectomy with a loop and heat, without accidents or incidents (*figs. 1, 2, 3*).

Subsequently, the patient was hospitalized for 24 hours for observation, during which she showed good

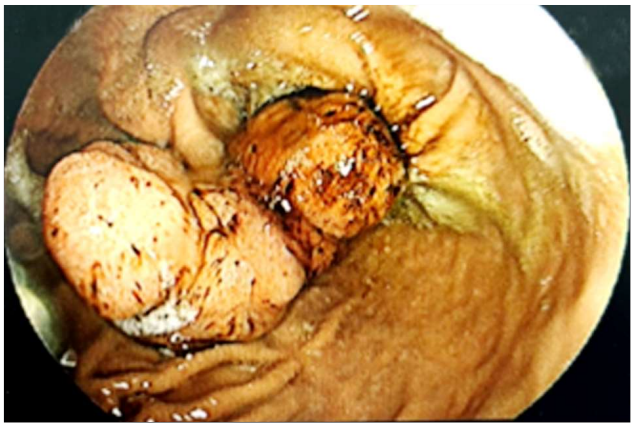

Figure 1 - Large polyp

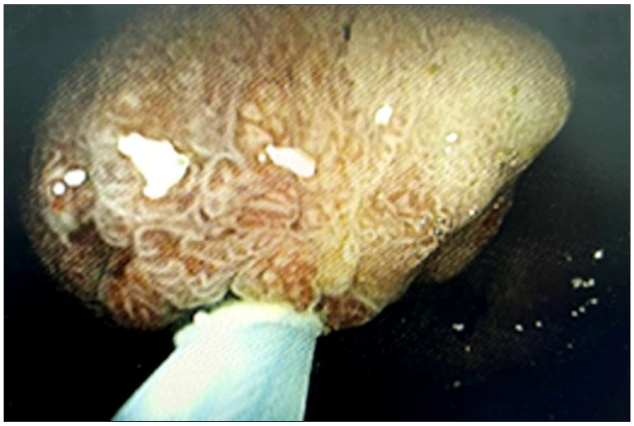

Figure 2 - Polyp resection with a loop

evolution, remaining hemodynamically stable, without pain, tolerating oral intake adequately, so her discharge was decided satisfactorily.

Fragmented polypoid nodule of 10 x 6 x 4 cm with a fine granular external surface (*fig. 4*) diagnosed as gastric polyp of adenomatous type (tubular adenoma) without atypia or metaplastic changes (*fig. 5*).

DISCUSSION

Peutz-Jeghers syndrome is a low-incidence polyposis characterized by the combination of mucocutaneous pigmented lesions and gastrointestinal tract hamartomatous polyps. It is considered a fairly rare entity in our setting (6).

The clinical presentation in these patients varies from asymptomatic individuals with mucocutaneous melanin pigmentation to abdominal emergencies and cancer. The most common clinical presentations caused by the polyps include intestinal obstruction (43%), abdominal pain (23%), blood in stools (14%), and expulsion of a polyp through the anus (8%). The remainder of cases (13%) are diagnosed based on the typical pigmentation of the syndrome (7).

The study and follow-up of patients diagnosed with Peutz-Jeghers syndrome begin with upper gastrointestinal endoscopy and colonoscopy (8).

Histologically, the polyps are true hamartomas characterized by the disordered overgrowth of native cells of the organ they originate from, including cells from all three germ layers in small intestine polyps and only one germ layer in colon and stomach polyps. They have distinctive features including their frond-like, "arboriform" structure, specific covering epithelium of the intestinal segment where the polyp is located, and a central core consisting of proliferation bands of smooth muscle of the muscularis mucosae that perforate the lamina propria and branch in each fold of the polyp. Due to this arboriform pattern, in histological sections, the epithelium may appear to be subadjacent to the lamina propria of the polyp, giving it a pseudotumoral invasive appearance, a phenomenon called "epithelial dislocation" (8).

Many of these lesions are incidentally found during endoscopy, are small, and do not cause significant problems. However, with growth, they tend to cause dyspepsia, bleeding, pyloric obstruction, and, in rare but reported cases, malignant degeneration. When hyperplastic polyps are larger than 10 mm in diameter, it is advisable to remove them with all possible precautions. Currently, there are minimally invasive endoscopic alternatives that avoid the need for patients

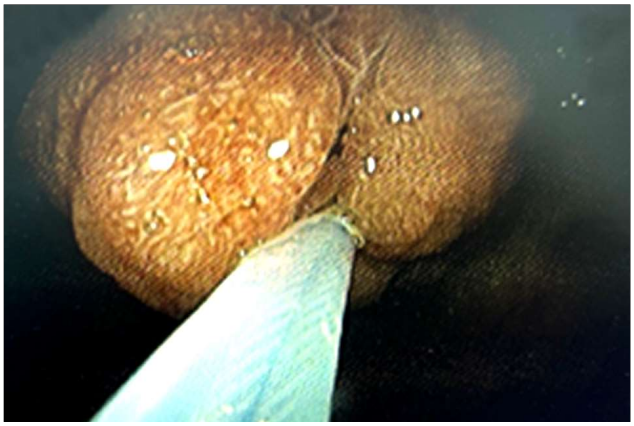

Figure 3 - Polyp resection with a loop

Figure 4 - Macroscopic image of polyp resection product

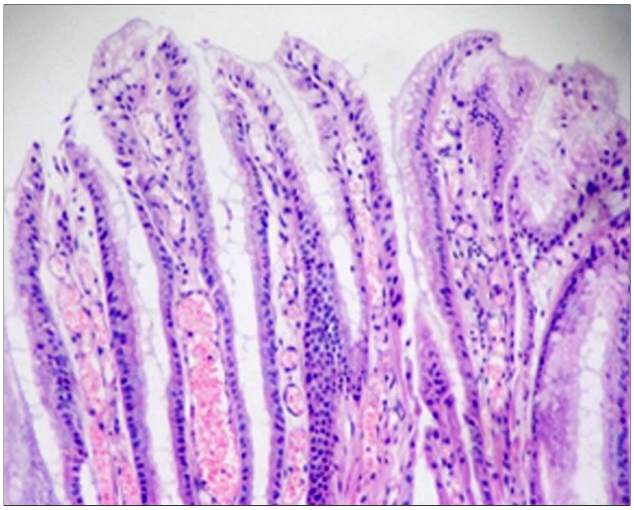

Figure 5 - Microscopically tubular adenoma

to undergo invasive surgical treatment. In our setting, there is an endoscopic alternative to offer to the patient, provided that histopathological confirmation of malignancy is negative, allowing for resection without the need for more invasive surgical treatments that entail greater complications, morbidity, and use of hospital resources (9).

CONCLUSION

There are several considerations that the endoscopist must take into account when managing patients with gastric polyps. One of the initial points is to determine if the polyps occur in the context of any hereditary polyposis syndrome, such as Peutz-Jeghers syndrome, familial adenomatous polyposis, juvenile polyposis, or Cowden syndrome. In these syndromes, it is recommended to start screening at the age of 18, perform endoscopy every 2-3 years, biopsy >5 polyps, and perform polypectomy in polyps >1 cm, in addition to screening for other organ-specific neoplasms in each genetic syndrome (10).

For patients without a genetic syndrome as described above, it is recommended to initiate the management algorithm with a biopsy of the polyp and surrounding mucosa. If the result is an adenoma, endoscopic or surgical resection is recommended. Resection is also recommended for symptomatic or dysplastic hyperplastic polyps (11).

Indications for endoscopic polypectomy include lesions with foci of dysplasia, sufficient experience to perform it and manage potential complications, and evaluating the risk-benefit according to the clinical context. Biopsies should be performed for better characterization of the polyp if the context suggests it. Polypectomy should be performed in the case of symptomatic lesions or if there is dysplasia in the polyp.

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Conflicts of interest and source of funding

None

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