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Case Report

Gastric polyposis: case report and review of the literature

Polipose gástrica: relato de caso e revisão da literatura

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ABSTRACT: Gastrointestinal polyps are elevations of the mucosa, often found in routine endoscopic examinations. We report a case of gastric polyposis manifested as Peütz-Jeghers Syndrome in a 25 years old female patient, with a history of abdominal pain in the epigastric region 12 days before hospital admission associated to vomits and hematemesis 3 days before admission. The patient underwent upper GI endoscopy, which showed multiple regular polypoid lesions with smooth surface. Computed tomography (CT scan) of the abdomen showed a large, coralliform and vegetative lesion of 16.3 x 10.2 x 5.4 cm. The surgical team chose to perform a total gastrectomy with Roux-en-Y reconstruction. The total surgery time was 150 min, with no further complications. Patient were in good clinical conditions, with no complications and was discharged on the 9th postoperative day. Histopathological study of the surgical specimen evidenced multiple gastric polyps of predominant hamartomatous pattern, with focal adenomatous transformation, free surgical margins, suggesting Peütz-Jeghers syndrome. Our patient did not demonstrate mucocutaneous hyperpigmentation, corroborating the fact that hyperpigmentation is not a *"sine qua non"* condition for the Peütz-Jeghers syndrome.

Keywords: Gastric polyposis; Peütz-Jeguers syndrome; Gastric hamartomatous polyps.

RESUMO: Pólipos gastrointestinais são elevações da mucosa circundante do sistema digestório, encontradas frequentemente em exames endoscópicos de rotina. A grande maioria é achado acidental e alguns pólipos podem indicar doença ou síndrome associada. Este artigo tem como objetivo apresentar um caso de polipose gástrica manifestada como Síndrome de Peütz-Jeghers em uma paciente de 25 anos, do sexo feminino, com história de dor abdominal em região epigástrica há 12 dias da admissão hospitalar, que evoluiu com vômitos e hematêmese 3 dias antes do internamento. A paciente realizou endoscopia digestiva alta (EDA), que evidenciou múltiplas lesões polipoides, regulares e de superfície lisa. Tomografia computadorizada (TC) do abdômen visualizou volumosa lesão vegetante coraliforme, de 16,3 x 10,2 x 5,4cm. Optou-se por realizar uma gastrectomia total com reconstrução em Y-de-Roux. O tempo total da cirurgia foi de 150min e ocorreu sem complicações. Paciente evoluiu com boas condições clínicas, sem intercorrências e recebeu alta hospitalar no 9º dia de pós-operatório (DPO). Estudo histopatológico da peça cirúrgica (estômago) evidenciou múltiplos pólipos gástricos de padrão predominante hamartomatoso, com transformação adenomatosa focal, margens cirúrgicas livres, sugerindo síndrome de Peütz-Jeghers. Nossa paciente não demonstrou hiperpigmentação mucocutânea, corroborando o fato de que a hiperpigmentação não é condição *"sine qua non"* para a síndrome de Peütz-Jeghers.

Palavras-chave: Polipose gástrica; Síndrome de Peütz-Jeghers; Pólipos gástricos hamartomatosos.

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INTRODUCTION

Gastrointestinal polyps are elevations of the surrounding mucosa of the digestive system, often found in 2-3% of all routine endoscopic examinations. The most are accidental findings and some polyps may indicate associated disease or syndrome, such as Family adenomatous polypopis, juvenile polyposis, Cowden's disease, Cronquite-Canada syndrome, and Peütz-Jeghers syndrome[1].

Peütz-Jeghers syndrome (PJS) occurs sporadically or hereditarily, and may show heterogeneity in clinical manifestations. Mucocutaneous pigmentation occurs in 95% of cases. In the gastrointestinal tract, hamartomatous polyps might appear early in life, being common in the small intestine, especially in the jejunum, colon, rectum and stomach[2].

CASE REPORT

A 25-year-old female patient was admitted to the department of surgery with abdominal pain for 12 days in in the epigastric region – continuous unrelated to feeding, cutaneomucosal pallor, postural hypotension and tachycardia; pain was associated with clear, daily vomiting 03 days after hospitalization. In addition, she presented episodes of hematemesis. In the emergency room, she underwent a blood transfusion with 02 concentrated red blood cells. On physical examination, she presented with worsening of overall health status, conscious, alert, with pallor (++/4+), eupneic and nourished. No signs of peritonitis. In upper digestive endoscopy (Figure 1) stomach with conserved capacity and distensibility was seen; An exophytic lesion of great proportion, softened, similar coloration and normal mucosa with a non-delimited basis was visualized in the gastric body.

On the body, sessile and polypoid lesion were observed. In the distal antrum, multiple similar lesions were identified. The largest lesion was proximal to the pylorus, not allowing its visualization. It was also observed in the small curvature of the body, oval ulceration greater than 15 mm of median depth coated by fibrin and with clots. An 8ml 1:10000 adrenaline injection was chosen for the treatment of active bleeding. The Pilorum was Pervious. Upper GI concluded that it was an important gastric polyposis and gastric ulcer with signs of active bleeding. CT of the abdomen (Figure 2 and 3) showed a massive coralliform vegetative lesion of 16.3x10.2x5.4 cm, which originates from the gastric wall/mucous diffusely and in the 1st duodenal part, protruding into the light of this organ without obstruction.

During hospitalization, the patient progressed with improvement of symptoms. New upper digestive endoscopy with biopsies identified hyperplastic polyps. A total gastrectomy and roux-y reconstruction were, then, indicated.

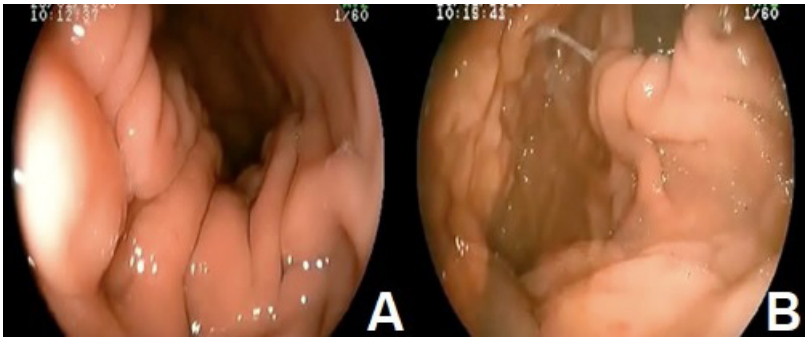

Figure 1. Digestive Endoscopy: Cluster of gastric polyps. **(A)** Gastric body with elevated formations, sessile, polypoids; **(B)** distal antrum with multiple similar lesions, causing a polypoid aspect

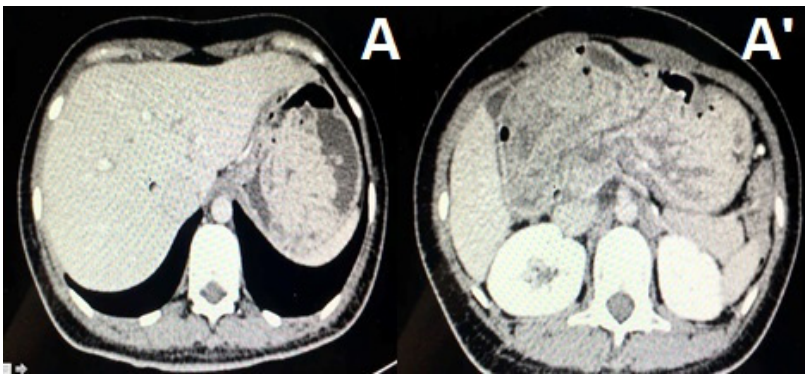

Figure 2. CT of the abdomen with venous contrast, showing a large coralliform lesion of 16.3 x 10.2 x 5.4 cm in the stomach **(A)** and in the first duodenal part **(A')**

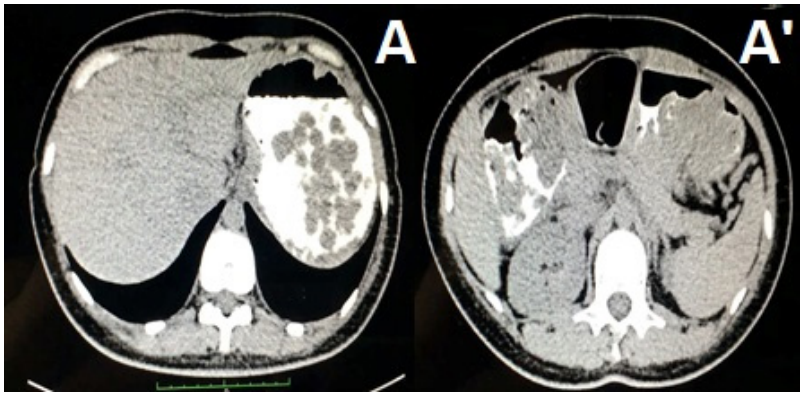

Figure 3. CT of the abdomen with oral contrast, showing large coralliform lesion of 16.3 x 10.2 x 5.4cm in the stomach **(A)** and in the first duodenal part **(A')**

SURGICAL DESCRIPTIOn

A median laparotomic incision was performed together with dissection by planes to the abdominal cavity and a voluminous stomach was visualized, with no evidence of neoplastic/metastatic lesions. Before the opening of the large omentum, the epiploic vessels were ligated and the ligation of right and left gastric vessels were performed. In addition to ligation of short epigastric vessels, the duodenal bulb was transected with an 80mm linear stapler. Roux-en-Y reconstruction was performed with a jejunum loop of 60 cm from Treitz and jejuno-jejunal anastomosis termino-lateral with prolene 3-0.

After the preparation of the loop, a termino-lateral esophagus-jejunal anastomosis with 25 mm circular stapler was performed, with negative test for air leakage. A jejunal loop reinforcement with prolene 3-0 was performed. After reinforcement, a cavitary drain oriented to esophageal-jejunal anastomosis was placed and hemostasis was carefully evaluated. The closure of the fascia was performed with vicryl 1. The surgical specimen (stomach) was sent for histopathological study (Figure 4).

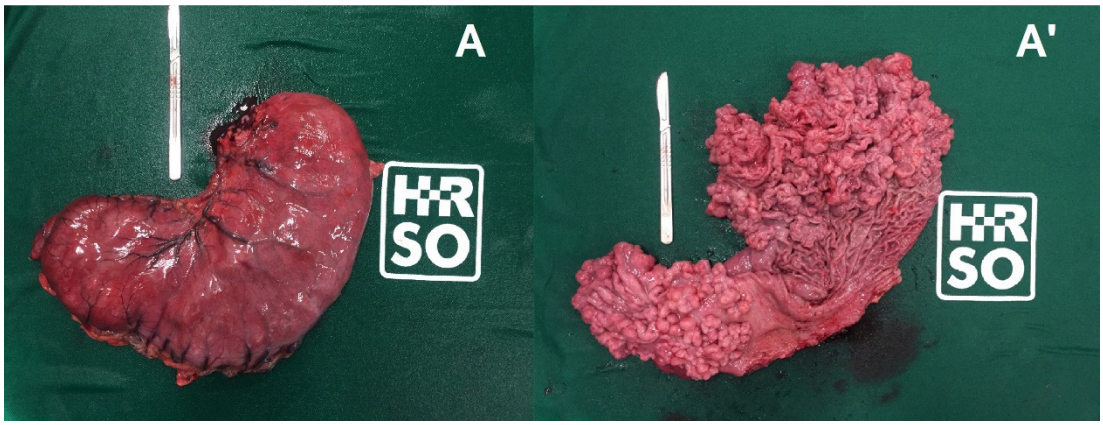

Figure 4. A e A'. Resection of the stomach (surgical part). **A'**. Macroscopic examination showing numerous polyps

The total time of surgery was 150 minutes, with no complications. The patient had no further complications and was discharged in good clinical conditions nine days after hospitalization. Macroscopic view of the biopsy of the surgical specimen showed a stomach measuring 25.0 x 12.0 cm, exhibiting smooth and brownish serosa. It exposes countless polyps or pediculated formations, confluent, forming two distinct "masses", the largest with 17.0 x 10.0 cm and the smallest 10.0 x 7.0 cm, 3.0 cm from the nearest resection margin. Many of them showed central axis covered by arborescent mucosa. Thickened muscle layer up to 1.0 cm. No lymph nodes were identified. On microscopy, multiple gastric polyps of predominant hamartomatous pattern were observed, with focal adenomatous transformation, and free surgical margins. It has been recommended to clinically investigate the possibility of Peutz-Jeghers syndrome.

DISCUSSION

Hamartomatous polyps of the digestive system are rare. When multiple, they are often associated with family or unfamiliar syndromes, such as PJS, juvenile polyposis, Cowden's disease and Cronkhite-Canada syndrome[3].

PJS is autosomal dominant and two of three

diagnostic criteria are necessary: family history, mucocutaneous pigmentation and intestinal hamartoma with the histologic findings typical for the syndrome[4]. The patient in our report did not have the diagnostic criteria for PJS, having only the criterion of hamartomatous polyps, being instructed to maintain follow-up to define diagnosis.

Common symptoms are abdominal pain, gastrointestinal bleeding and anemia. Hamartomatous polyps have a vascular stroma, which explains the tendency to bleeding[5]. These symptoms described in the literature were the same as those described by the patient in question. Due to the extension of polyps and risk of malignancy, the surgical team opted for laparotomy and total gastrectomy.

The STK11/LKB1 gene mutation can be found in 30 to 80% of patients with PJS[6]. These patients are at high risk of developing malignancies in multiple organs, with a risk of 93% developing cancer during life[6]. Literature shows the importance of rigorous follow-up of those patients, even when they do not have all criteria for PJS. In addition, they corroborate the team's conduct of performing total gastrectomy due to the enormous amount of hamartomatous polyps with malignancy potential.

In patients with solitary polyps, total endoscopic polypectomy is the gold-standard treatment. These small and solitary polyps can be resected by endoscopy, but in larger and numerous polyps, gastrectomy should be considered due to the possibility of malignant component[5].

CONCLUSION

Patients with PJS have an increased risk of developing cancer or transformation to malignant polyps in the digestive system and other organs. Although our patient does not have all criteria for PJS, it is important to have a proper follow-up. Total Roux-en-Y reconstruction gastrectomy proposed by the surgical team was effective for the treatment of the patient.

Degree of participation: We inform for due purposes that the article was made jointly by the group of authors with the following degree of participation: Data collection - *Coêlho RF*. Organizational guidance and on the essence, argumentation and relevance of the work: *Lima DL, Ribeiro JP, Lima G, MS*. Analysis, research of articles, reading and exclusion of articles not pertinent to the involvement of the chosen theme: *Coêlho RF, Lima DL, Lima RNC*. Reading and writing the content: *Coêlho RF, Lima DL, Lima RNC*. Revision of the text as to the integrity and veracity as to the sources used: *Coêlho RF, Lima DL, Ribeiro JP, Lima G, Martins E*. Thus, the group of authors certifies joint participation in the preparation of the article, hoping to contribute to the theme in question.

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