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Giant inflammatory fibroid polyp

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Résumé:

Les polypes fibroïdes inflammatoires sont des lésions polypoïdes rare, mais bien décrites dans la littérature. Ils se voient dans le tractus gastro-intestinal le plus souvent dans l'estomac, suivi par l'iléon mais rarement dans le côlon, le duodénum ou de l'œsophage. Ils se voient en particulier dans la sixième décennie de la vie. Nous rapportons le cas d'un patient de sexe masculin âgé de 49 ans, qui a présenté une douleur épigastrique depuis 1 mois. La fibroscopie a montré une masse sous-muqueuse située au niveau de la petite courbure de l'estomac. Le scanner abdominal a montré que cette masse avait un développement endoluminal. Une gastrectomie 2/3 a été réalisée. A l'examen macroscopique, la tumeur mesurait 4 x 3,5 cm, sa surface était bosselée, et par endroit lisse et nodulaire. Elle est situé à 6,5 cm de la limite du pylore et 3,5 cm à partir de la limite fundique. Elle est de siège sousmuqueux, bien que limitée, elle soulevait et ulcérait la muqueuse gastrique. Il est blanchâtre avec des foyers jaunâtre. L'examen histopathologique a montré qu'il s'agissait d'une prolifération tumorale conjonctive d'architecture fasciculaire et storiforme. Les cellules tumorales sont fusiformes, leur cytoplasme est éosinophile. En profondeur la tumeur dissociait la musculaire gastrique et envahissait en surface la petite courbure de l'estomac. Le profil immunohistochimique des cellules tumorales était: CD117, Dog, PS100, ALK: négative, caldesmone: positif et CD34: positif dans les structures vasculaires. Ce cas est particulier sur le plan clinique et anatopathologique. Il doit être gardé à l'esprit lors de l'évaluation d'une tumeur mésenchymateuses de la petite courbure de l'estomac.

Abstract

Inflammatory fibroid polyps are uncommon but well documented polypoid lesions occurring in the gastrointestinal tract most frequently in the stomach followed by the ileum but rarely in the colon, duodenum or esophagus especially in the sixth decade of life. We present the case of a 49 years old male patient who has been presenting an epigastric pain for 1 month. The fibroscopy shows a submucosal mass in the lesser curvature of the stomach. In fact, the abdominal scanner shows a mass in that area with an endoluminal development and board-based implantation. A gastrectomy 2/3 was performed. At the macroscopic level, we found a tumor (4 x 3.5 cm) that has a bumpy surface, it is also nodular and smooth, located at 6.5 cm from the pyloric limit and 3.5 cm from the fundus limit. It has a submucous siege, although limited, lifting it and ulcerating the gastric mucosa. It is whitish with yellowish foci. The histopathological examination shows that this is indeed a conjunctival tumor proliferation having a fascicular architecture and storiform. Tumor cells are spindle-shaped and eosinophilic cytoplasm. The tumor depth dissociates gastric muscle and surface and invades the lining. The immunohistochemical profile was: CD117, Dog, PS100, ALK: negative, CD34: positive in the vascular structures and caldesmon: positive. This case has peculiar clinical and pathological particularities that should be kept in mind when evaluating a mesenchymal tumor of the lesser curvature of the stomach.

Introduction

The Inflammatory Fibroid Polyp (IFP) is a very rare benign tumor of the gastrointestinal tract. It was first described as "polypoid fibroma" in 1920 by Konjetzny then as an eosinophilic submucosal granuloma in 1949 by Vanek (1). However, the term "IFP" is now generally accepted after Ranier and Helwing proposed it in 1953(2). The origin of IFP remains uncertain, although some reports suggest a myofibroblastic or a vascular origin (3). Nonetheless, recently, it has been generally accepted that this is not a neoplasm, but it is instead a reactive process to physical, chemical, or microbiological stimuli (4). The clinical symptomatology of IFP depends on the location of the lesion, including abdominal pain, dyspeptic symptoms, weight loss, bleeding, iron-deficiency anemia, and intussusceptions (5). We are reporting an unusual case of IFP developed in the lesser curvature of the stomach. The diagnostic was confirmed by immunohistochemistry.

Case study

A forty-nine years old men was admitted to the General Surgery unit and he has been suffering from an epigastric pain for one month. He had no significant medical history or any previous surgical interventions. An upper digestive endoscopy had been realized and revealed a submucosal mass located in the lesser curvature of the stomach. An abdominal scanner showed a mass in the lesser curvature of stomach with an endoluminal development and board-based implantation (picture 1). Laboratory evaluation displayed a negative ACE and a negative CA19-9. The patient was scheduled to have a gastrectomy 2/3. During the surgery a tumor (4*3.5cm) was found (picture 2). Postoperative macroscopic examination of the surgical specimen showed a firm 4*3.5cm mass, with a bumpy surface, and which is nodular and smooth. It was located in the lesser curvature of the stomach at 6.5cm from the pyloric limit and 3.5cm from the fundus. It has a submucous localization, although limited. The tumor involved the entire thickness of the stomach with extensive ulceration of the overlying mucosa (picture 3 and 4).

Histopathological analysis revealed a submucosal polypoidal lesion with a variable cellularity, which is composed of fibroblastic stroma with prominent network of thick wall capillary vessels. The fibroblast-like cells were arranged in fascicles and in a whorl formation around the vessels within an inflammatory background. The cells appeared uniform, had abundant cytoplasm with bland looking spindle-shaped nuclei. The inflammatory cells were composed of eosinophils and lymphocytes.

It was doubted in the primary diagnoses whether it was a gastro-intestinal stromal tumor (GIST) or a Vanek tumor.

Immunohistochemical analysis was done on the specimen. The spindle cells were only positive for caldesmon (picture 5), and negative for CD117, Dog, PS100, ALK, and CD34. The cells of blood vessels were positive for CD34.

The diagnosis of inflammatory fibroid polyp atypical is confirmed.

The postoperative course was uneventful and the patient was discharged after eight days.

Discussion

The incidence of gastric polyps found in the literature ranges from 0.1% to 0.8% in the autopsy series. However, series based on endoscopic findings show a frequency ranging from 1% to 4% in performed endoscopies (6). They fall under the classification of sub mucosal connective tissue tumors. Vanek described them at first (1). Their incidence was rare, they occur most frequently in the prepyloric region but they may be found in any other place in the digestive tract. About 1000 IFPs have been described in the literature , 70% of which were located in the stomach , followed by the small bowel 23%, colon and rectum 4%, gallbladder 1%, esophagus 1%, duodenum 1%, appendix <1% . They are usually discovered in the 5th to 7th decade of life(7).

No precise etiology of IFPs is clear, it has been postulated that they are related to infections, allergies, inflammations, tumors, previous surgeries or traumas. It might be that when the mucosa is damaged, it will incite an inflammatory response in the adjacent submucosa and then stimulates the genesis of a polypoid mass. The study of "Gastroestudio Clinica Las Vegas"(8) suggests that IFPs are more frequent amongst patients followed-up for atrophic gastritis and pernicious gastric. Recently, Nishiyama et al.(9) reported a case of IFP that decreased in size after a Helicobacter pylori eradication therapy. They claimed that factors derived from gastric epithelial cells in response to this bacterial infection, such as growth factors and inflammatory cytokines, might affect the growth of IFP.

Symptoms of these lesions depend on their size and their localization(10). They are usually less than 4cm in diameter. In most patients, with IFPs located in their small bowel, the clinical picture is characterized by symptoms and signs of obstructive ileus. These are usually due to the intussusceptions, thus rapidly becoming a surgical emergency. Other symptoms may even emerge such as abdominal pain, weight loss, ulcer-like symptoms, overt gastrointestinal bleeding, or iron-deficiency anemia(11).

Usually lesions less than 3 cm in size are treated with endoscopic thermal loop resection. In case it is incomplete, it can be concluded with an argon plasma laser(12). Nevertheless, if the tumors are large or if a malignant tumor is suspected, then the treatment will consist of a gastrectomy(13).

Histopathologically, IFPs arise from the submucosa and are characterized by the involvement of, mainly, the lamina propria and submucosa, hyperplasia of connective tissue elements such as fibrocytes, fibroblast, collagen tissue, and vascular proliferation. Indeed, there is an inflammatory response, with infiltration of eosinophils, lymphocytes, plasma cells, prominence of the small vessels like arterioles and capillaries and finally the concentric arrangement of fibrous connective tissue in an onionskin pattern(14). The recurrent case report documented almost all of the mentioned features.

Further immunohistochemical analysis can demonstrate a diffuse positivity for vimentin and a variable reactivity for CD34, actin, desmin, CD117, and S100 protein(14). This case documented reactivity to caldesmon. Microscopically, the diagnosis of IFP can be mistaken for lesions, from granulation tissue to high-grade sarcoma. The histologic differential diagnosis must include eosinophilic gastro-enteritis, gastrointestinal stromal tumor, inflammatory myofibroblastic polyp, hemangioendothelioma and hemangiopericytoma(10) (15) (16). We should encounter a complication of adenocarcinoma or adenoma with the gastric IFP. Mori et al. described 50 patients with gastric IFP, 8% of the cases were accompanied by an adenocarcinoma or an adenoma in the same area (17). Kolodziejczyk et al. described three cases of gastric IFP in which a carcinoma was overlying or immediately adjacent to the IFP. That is why during endoscopic examination of a patient having a gastric IFP, we should be aware of any possible associated gastric neoplasms. In this case, it was not associated with a neoplasm in the stomach(14).

To conclude, IFP is a rare benign lesion occurring throughout the gastrointestinal tract.

IFP is suspected in endoscopies from board pedicle.

The most frequent characteristic is superficial ulceration occurring in the most prominent zone. Immunohistochemistry after resection can confirm the diagnosis.

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picture 3: HE stain, low power showing the tumor involving the entire thickness of the stomach with extensive ulceration of the overlying mucosa.



picture 4: HE stain, showing eosinophils poly nuclei infiltring the tumor



picture 5: Diffuse cytoplasmic staining for h-caldesmon in virtually every cell of this Vaneck tumor.