

Inflammatory Fibroid Polyp.

A case report and review of the literature



Ann. Ital. Chir., 2012 83: 347-351

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Inflammatory Fibroid Polyp. A case report and review of the literature

INTRODUCTION: *The Inflammatory fibroid polyp (IFP) is a mesenchymal polypoid lesion of the gastrointestinal tract that follows a benign course. Incidence is extremely low: from 0,1% to 2 %. Histologically, it consists of a submucous proliferation of vascularized fibromuscular tissue with a high eosinophils inflammatory infiltration. IFP can arise everywhere in the gastrointestinal tract but is described more frequently in the gastric antrum (70%).*

CASE REPORT: *We report a case of a 71-year-old woman presented to our department with a worsening history of lack's appetite, nausea and early satiety. We performed a review of the literature from 1949 to 2011. 196 cases of IFPs were found.*

CONCLUSION: *Clinical symptoms are heterogeneous and endoscopy's examination revealed only presence of a sub-mucosal lesion, and their biopsies often gave not diagnostic localization. In the differential diagnosis, it's important to discern between eosinophilic gastroenteritis, gastrointestinal stromal tumor, inflammatory pseudotumor, hemangioendothelioma, and hemangiopericytoma. Eco-endoscopic appearance and biopsies associated may provide useful informations, that can steer to the diagnostic suspect of IFP. Despite this is a benign lesion, this one often needs a surgical excision on healthy margin. In literature is also described high local recurrence, specially when incomplete excision proceeded.*

KEY WORDS: Gastric sub-mucosal tumor, Inflammatory fibroid polyp, Stomach, Vanek's Tumor.

Introduction

The Inflammatory fibroid polyp (IFP) is a mesenchymal polypoid lesion of gastrointestinal tract that follows a benign course. Incidence is extremely low: from 0.1%¹ to 2%².

The etiology is unknown, the inflammatory or neoplastic nature of this lesion is still a matter of debate. IFP can arise everywhere in the gastrointestinal tract, but is more frequently described in the gastric antrum (70%)³. We report a large IFP located on the lesser curvature of the stomach and our review of the literature.

Case report

A 71-year-old woman was presented to our department with a worsening history of lack's appetite, nausea and early satiety. No family history of gastrointestinal tumors was referred. She was followed up for 7 years after an endoscopic diagnosis of benign sub-mucosal polyp of jux-

Pervenuto in Redazione Luglio 2011. Accettato per la pubblicazione Luglio 2011

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ta-pyloric region of the lesser curvature of the stomach. The endoscopic aspect was of a rounded lesion of 6 cm diameter, with central ulcer. The Echo-endoscopic pattern was hypoechogenic, with regular margins, rising from the second layer of gastric wall. During the pre-operative assessment, echo-endoscopy (Fig. 1) and CT scans (Fig. 2) confirmed a 6 cm diameter ulcerated lesion limited to gastric sub-mucosa, without evidences of lymphatic or systemic disease. A Ca 19-9 test blood test was negative. An echo-endoscopic guided needle-biopsy was performed, showing granulation tissue and CD34 positive myofibroblasts.

Due to the symptoms, diameter of the lesion and pre-pyloric localization, the patient underwent a gastric resection, with Roux-en-Y reconstruction. The post-operative course was uneventful and after 9 days the patient was discharged in good condition.

The specimen showed a soft, fibrotic polyp of 8x3 centimeter limited to submucosa, without lymphatic disease. The macroscopic appearance showed a lesion gelatinous in appearance and with well defined margin and with mucous ulceration (Fig. 3).

A magnification of 10X, ematossiline-eosine coloration showed: nests of lymphocytes, blood vessels, collagen fibers and edema due to cytokines that attract inflammatory agents.

Immunohistochemistry was: Vimentin positive, Cd68 positive, PanKeratin AE1-AE3 and CD34 negative (positive only in the small vessel), C-Kit (CD117), S100, HMB, EMA, Desmin and Actin negative: *Helicobacter Pilory* (color Warthin-Starry) research was negative. Therefore a diagnosis of a Vanek's Tumor, or fibroid polyp, was made (Fig. 4). The patient was discharged in good condition, she was able to eat without difficulty.

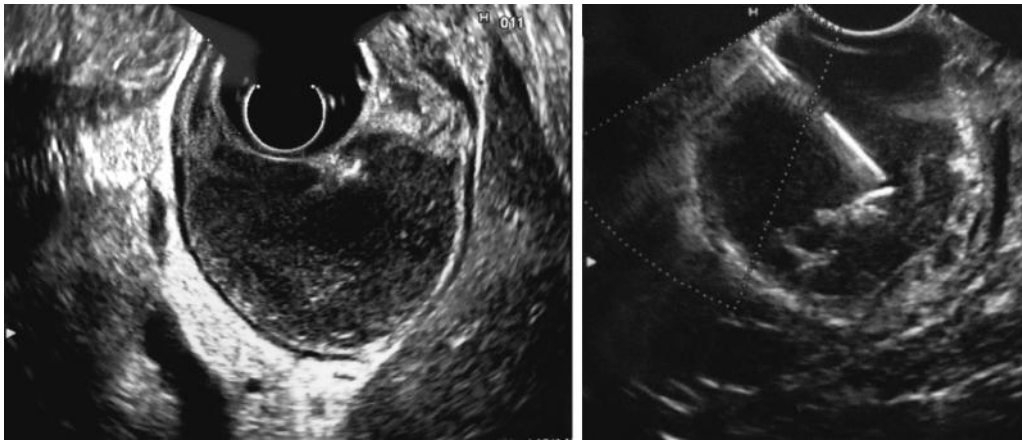


Fig. 1: Echo-endoscopic guided polyp biopsy.



Fig. 2: CT scan showing 5x3cm gastric polip.



Fig. 3: Macroscopic aspect.

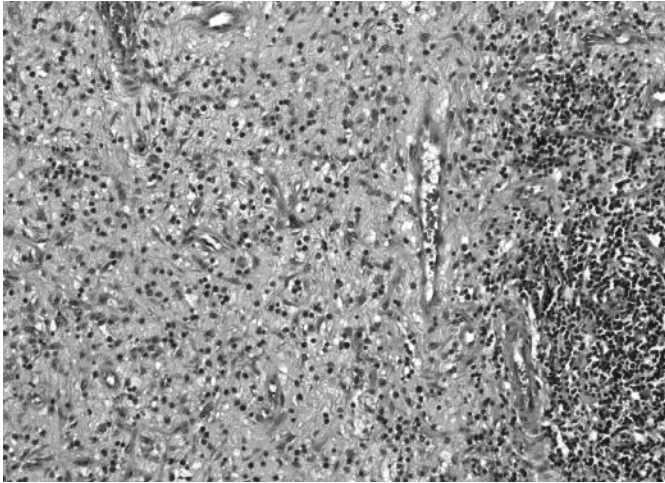


Fig. 4: histological aspect.

Discussion

The first description of this rare finding as “polypoid fibroma” is by Konjetzny in 1920⁴. Vanek described it as eosinophilic submucosal granuloma in 1949 (hence the synonym of Varnek’s Tumor)⁵. The term “inflammatory fibroid polyp” was firstly purposed by Helwig and Rainer in 1953⁶. Histologically, it consists of a sub-mucous proliferation of vascularized fibromuscular tissue with a high eosinophils inflammatory infiltration. In the differential diagnosis, it is important to discern between eosinophilic gastroenteritis, gastrointestinal stromal tumor, inflammatory pseudotumor, hemangioendothelioma, and hemangiopericytoma.

We performed a review of the literature from 1949 to 2011. 196 cases of IFPs were found⁵⁻⁵².

The distribution in the intestinal tract was 2 esophageal (1.02%), 126 gastric (64.29%), 4 duodenal (2.04%), 39 of the small intestine (19.90%), 6 cecal IFPs (3.06%), 17 of the large intestine (8.67%) and 2 rectal inflammatory fibroid polyps (1.02%). Sex was: 82 male (47.95%) and 89 female (52.05%), 25 not specified. Age range was from 4 years¹⁰ to 93 years²⁸ and the maximum incidence is described in the fifth and sixth decades (21.64% and 22.81% respectively). The 23 cases from 1949 to 1983 were treated only with surgery. From 1984 to present day, only 49 cases are described. The treatment was: open surgery for 25 cases (51.02%), endoscopic resection for 19 cases (38.78%), *Helicobacter Pylori* eradication for 3 cases (6.12%). One case (2.04%) was treated with *Helicobacter Pylori* eradication followed by endoscopic resection. In 1 case (2.04%) a laparoscopic trans-gastric excision of the tumor was performed. The majority of IFPs are asymptomatic and the diagnosis is often incidental. When symptomatic IFPs can be associated with abdominal pain, anemia, dyspeptic symptoms, and weight loss.

However, IFP is a benign lesion that does not metastasize and rarely recurs²⁵. Eco-endoscopy can disclose useful information for the diagnosis. The most frequent aspects are: indistinct margin, hypoechogenicity, homogeneous appearance, and location within the second and/or third layer. These findings have been demonstrated as being very closely correlated to the histological findings⁵⁴.

Pathogenesis is still a matter of debate. Over-expression of cyclin D1 in all cases suggests that a defect in cell-cycle regulation may be involved in the growth of IFPs⁵⁵. In literature, there is no agreement about involvement of *Helicobacter Pylori* in the pathogenesis of IFP. Matsuhashi et Al.⁴¹ proposed the disappearance of the polyp after the eradication of *Helicobacter*, as a proof of their relationship. Mitsunobu Matsushita and Kazuichi Okazaki instead, differ from Matsuhashi, arguing that no histological confirmation to the diagnosis was sought. Therefore the association of IFP and *H. pylori* infection requires further investigation³⁸. In our particular case, the *Helicobacter Pylori* research was negative.

Regarding the GIST link, a recent study, based on an analysis with a large panel of immunohistochemical agents, showing the absence of c-kit, SCF, and h-caldesmon immunoreactivity, denied a relationship with GISTs. The authors proposed the proliferation of stromal cells in IFPs as being of dendritic origin, with some cells also exhibiting myofibroblastic features. The same study purposed Epstein Barr virus and HHV8 as unlikely etiologic agents of IFPs⁵⁵.

Conclusion

In conclusion, IFP are benign polyps with low incidence. Clinical symptoms are heterogeneous and endoscopy’s examination revealed only the presence of a sub-mucosal lesion, their biopsies also revealed that the sub-mucosal nature often are not diagnostic. In differential diagnosis, it is important to discern between eosinophilic gastroenteritis, gastrointestinal stromal tumor, inflammatory pseudotumor, hemangioendothelioma, and hemangiopericytoma.

Eco-endoscopic appearance and biopsies associated may provide useful informations, those can steer to the diagnostic suspect of IFP. Despite this is a benign lesion, it’s often necessary a surgical excision on healthy border. Infact, in literature, many cases are reported for local recurrence when incomplete excision is proceeded.

Riassunto

INTRODUZIONE: Il polipo fibroide infiammatorio (IFP) è una rara lesione polipoide benigna del tratto gastroenterinale che segue un decorso benigno. L’incidenza è estremamente bassa: dallo 0,1% al 2%. Istologicamente ritro-

viamo una proliferazione sottomucosa di tessuto fibromuscolare vascolarizzato con un ricco infiltrato infiammatorio di tipo eosinofilo.

CASE REPORT: Riportiamo il caso di una donna di 71 anni giunta alla nostra osservazione con una storia di calo dell'appetito, nausea e sazietà precoce inaggravanti. Da una review dei 196 casi trovati in letteratura dal 1920 al 2011 emerge che i sintomi clinici sono eterogenei e non patognomonicamente così come gli esami endoscopici che rilevano solo la presenza di una lesione sottomucosa, le cui biopsie, data la sede, spesso non sono diagnostiche. Per contro l'aspetto eco-endoscopico e le biopsie associate possono dare utili informazioni in grado di indirizzare preventivamente verso il sospetto diagnostico di IFP.

CONCLUSIONI: Nella diagnosi differenziale è importante considerare gastroenterite eosinofila, GIST, pseudotumori infiammatori, emangioendelioma ed emangiopericitioma. Nonostante si tratti di una lesione benigna è spesso necessario un approccio chirurgico con escissione su margine sano poiché sono segnalati casi di recidiva locale in caso di asportazione incompleta.

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