



Contents lists available at ScienceDirect

International Journal of Surgery Case Reports

journal homepage: www.casereports.com

Prepyloric gastric inflammatory fibroid polyp presenting as chronic epigastric discomfort in a 5th decade aged female: A case report

Jad J. Terro^{a,*}, Etienne El-Helou^a, Alaa Kansoun^a, Alaa Taha^b, Jocelyne Karaki^a, Jessica Naccour^c, Nahed Damaj^d, Houssam Khodor Abtar^e^a General Surgery Department, Faculty of Medical Sciences, Lebanese University, Mount Lebanon, Lebanon^b Department of Gastroenterology and Endoscopy, Central Military Hospital, Beirut, Lebanon^c Emergency Medicine Department, Faculty of Medical Sciences, Lebanese University, Mount Lebanon, Lebanon^d General Medicine Department, Faculty of Medical Sciences, Lebanese University, Mount Lebanon, Lebanon^e Department of General Surgery, Central Military Hospital, Beirut, Lebanon

ARTICLE INFO

Article history:

Received 6 September 2020

Received in revised form

22 September 2020

Accepted 22 September 2020

Available online 25 September 2020

Keywords:

Gastric inflammatory Fibroid

Gastric polyp

Chronic abdominal pain

Surgical resection

Diagnostic challenge

Case report

ABSTRACT

INTRODUCTION: Inflammatory fibroid polyps is a rare entity that mostly occur in the stomach. Gastric type is usually asymptomatic or may show nonspecific symptoms. Diagnosis is mainly postoperative with limited roles of usual diagnostic techniques.

PRESENTATION OF CASE: A 42 years old healthy female presenting with chronic symptoms for epigastric discomfort and mild nausea. Labs showed mild anemia. A gastric lesion was detected by Endoscopy and being studied by echo-endoscopy and needle aspirate. Gastric Inflammatory fibroid polyp was diagnosed after distal gastrectomy by histopathology and immunohistochemistry.

CONCLUSION: Gastric inflammatory fibroid polyp is a preoperative diagnostic challenge of unclear pathogenesis. Histopathology and immunohistochemistry are the gold standard. Studies around this exact pathology are required for better management and prevention.

© 2020 The Author(s). Published by Elsevier Ltd on behalf of IJS Publishing Group Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Inflammatory Fibroid Polyps is a rare gastrointestinal mesenchymal neoplasm. It is first described by Dr Konjetzny in 1920 as a fibromatous polyp, then in 1949 by Dr Vanek as a granulomatous eosinophilic submucosal lesion, and lastly by Drs Helwig and Ranier in 1953 assigning it by its present name [1]. It occurs mostly in the gastric antrum and presents 0.1% of all gastric polyps [2].

Although mostly asymptomatic, symptoms are nonspecific, the diagnosis can be reached by using Endoscopy, Echo-Endoscopy (EE) and Computed Tomography (CT) scan of Abdomen and pelvis, but final diagnosis is only reached in 10% of cases before resection which is the mainstay in the treatment and can be accomplished surgically or endoscopically [2].

Here we present a case of a 42 year-old healthy female with a chronic abdominal discomfort who was diagnosed with a 2.8 × 2.4

cm pre-pyloric Gastric inflammatory Fibroid polyp (GIFP) and was treated with distal gastrectomy and Billroth type 1 anastomosis.

This case was reported in accordance with the SCARE criteria [3].

2. Case description

This is a case of 42 years old previously healthy female with a negative family and surgical history, presenting to the outclinics for a chief complaint of chronic epigastric discomfort several months ago. There was an associated nausea and postprandial abdominal pain that is relieved by anti-acids treatment. Her symptoms were attributed to be due to gastritis, Proton Pump Inhibitor medication 40 mg was prescribed with partial response.

An Ultrasound of abdomen and pelvis was normal. Physical exam shows only mild epigastric tenderness. Laboratory tests showed mild anemia and normal else parameters. A gastroscopy (Fig. 1) was performed showing a prepyloric sub-epithelial mass with central ulceration. Colonoscopy had normal findings. Echo-Endoscopy (Fig. 2) with needle aspirate was held showing a 2.8 × 2.4 homogenous submucosal tumor with regular borders and scant vascularization.

Cytology came with benign appearing epithelial cells and no malignant cells. An open distal gastrectomy with Billroth 1 gastro-

* Corresponding author.

E-mail addresses: j.terro@hotmail.com (J.J. Terro), Etienne-elhelou@hotmail.com (E. El-Helou), A.kanso@hotmail.com (A. Kansoun), Alaataha080@gmail.com (A. Taha), jocelyne.karaki@hotmail.com (J. Karaki), jessicanaccour14@hotmail.com (J. Naccour), nahed.damaj@outlook.com (N. Damaj), dr.houssamabtar@gmail.com (H.K. Abtar).

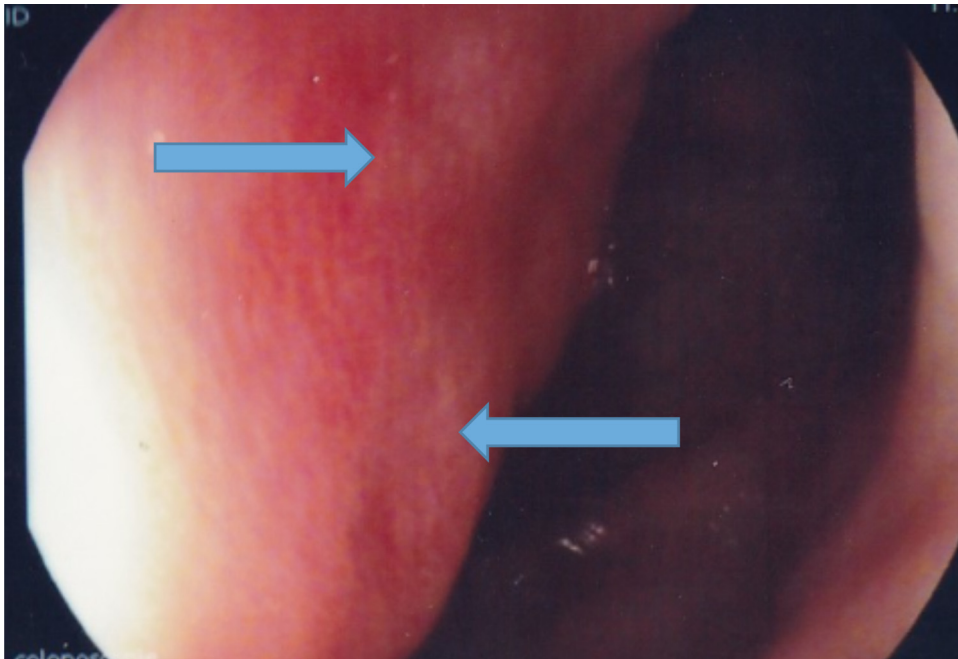


Fig. 1. Gastroscopy showing a pre-pyloric sub-epithelial lesion (Arrow).

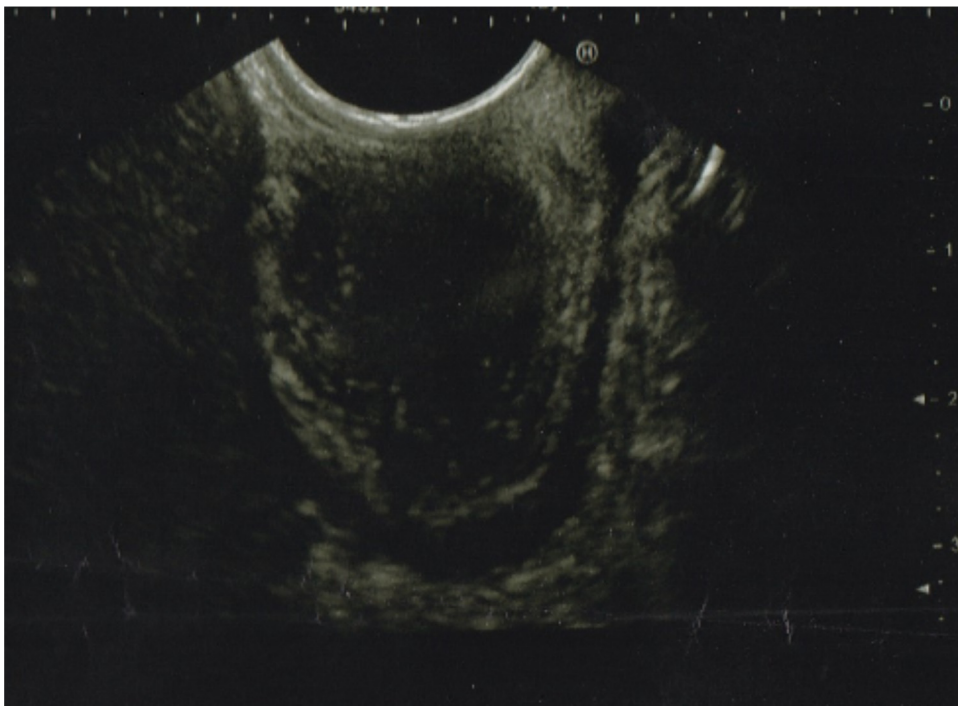


Fig. 2. Endoscopic ultrasound showing the submucosal extension of the previously seen pre-pyloric gastric lesion: 2.8×2.4 homogeneous mass with regular borders (Arrow).

duodenal anastomosis was done. Total operative time was 90 min. Patient was followed on regular floor over 3 days, then clear fluid diet was started, then was discharged home on day 4 on the same food regimen for 3 weeks. Advancing the diet was done successively. The final pathology and immune histochemistry came up with the diagnosis of GIFP with negative margins and positive CD-34, negative for CD-117 and DOG-1. Patient had an uneventful post-operative period.

3. Discussion

GIFP has a low incidence worldwide, with a number of 52 cases described in the last 20 years [4]. It is associated with mutation in PDGFR-gene. Peak age is 7th-8th decade with male predominance. Size at initial diagnosis varies widely and may reach 12 cm, ranging between 2–5 cm mainly. Its accurate pathogenesis is unknown, but is described to be due to an irritating agent (*Helicobacter Pylori*,

metabolic factors, parasites) leading to a benign reactive lesion [2]. It usually arise between the deep gastric mucosa and the submucosa without passing the muscularis propria [5]. It mostly grow in the gastric antrum (61%) and pyloric or prepyloric area (15%) and less likely in the cardia (7%) and the body (4%) [4]. GIFF present with unspecific symptoms of postprandial abdominal pain, dyspepsia symptoms, possible weight loss, anemia, and rarely massive gastric bleed [2]. It is mostly confused with other sub-epithelial gastric pathologies like gastrointestinal stromal tumor (GIST). Carcinoid tumors, Leiomyomas, lipomas, schwannomas, pancreatic heterotopy, granular cell tumor, glomus tumors and varices belong to the differential diagnosis of GIFF [5].

As other gastric tumors, final diagnosis of GIFF is reached in 90% of cases postoperatively with histopathology. Other preoperative techniques exist and each has a diagnostic value. CT scan and MRI of abdomen with contrast can find the lesions and may help in differential diagnosis and eliminating other pathologies [2]. Endoscopy can be diagnostic and therapeutic and is capable to resect lesions up to 2 cm easily by polypectomy, submucosal resection or snare cautery [4]. It appear pedunculated or flat with a possible central ulceration, biopsies can be taken but are misleading. EE plays a particular role in diagnosis and distinguishing GIFF from other lesions. It usually seems hypoechogenic and homogeneous with nondistinct borders without invading the muscularis propria. Fine needle aspirate or core biopsy can be accomplished under EE and are useful in lesions >2 cm or having malignant features (irregular margins, peri-tumoral Lymphadenopathy, multiple echogenity, cystic spaces, large size) [5].

GIFF don't metastasize or recur. Meanwhile, margin-free resection is the mainstay for treatment. Endoscopically nonresectable lesions necessitates surgical intervention according to the site of the lesion [1]. On final histologic examination, GIFF is characterized by a pathognomonic onion-skin layered proliferation of spindle cells submucosally as well as irregular capillary proliferation. Besides, there is a varying amount of inflammatory process, with domination of macrophages and eosinophils [2]. On immunohistochemistry, it shows close resemblance with its malignant counterpart GIST in being CD-34 positive, but CD-117 and DOG1 are only positive in GIST [1].

This 42 years old female had a classic presentation of GIFF that was detected by Endoscopy and EE and biopsies showed no malignant nature, then surgical resection of the endoscopically unresectable sessile lesion by distal gastrectomy yields the correct final diagnosis thanks to the histopathology and immunohistochemistry. Counting on the rarity of GIFF cases, this case was written for documentation and adding to the present literature data that may be later source for further studies that serves in better analysis and diagnosis of this non-symptom-specific disease.

4. Conclusion

GIFF is still rare and infrequent despite the modern diagnostic techniques that are still inert in precisely diagnosing an encountered gastric subepithelial lesion in symptomatic or asymptomatic patients. It is still a preoperative challenge for physicians. Among others, EE showed the most added value in differential diagnosis and aiding in management and follow-up. Resection/surgery is the mainstay treatment. Histopathology plus immunohistochemistry remains the gold standard in diagnosis.

Open Access

This article is published Open Access at [sciencedirect.com](https://www.sciencedirect.com). It is distributed under the [IJSCR Supplemental terms and conditions](#), which permits unrestricted non commercial use, distribution, and reproduction in any medium, provided the original authors and source are credited.

Declaration of Competing Interest

The authors report no declarations of interest.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Ethical approval

The study type is exempt from ethical approval.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Author contribution

Writing the paper: Jad J Terro, Jocelyne Karaki, Etienne El-Helou. Data collection: Alaa Taha, Jessica Naccour, Nahed Damaj, Alaa Kansoun.

Supervision: Houssam Khodor Abtar.

Registration of research studies

N/A.

Guarantor

Dr Houssam Khodor Abtar.

Provenance and peer review

Not commissioned, externally peer-reviewed.

Acknowledgements

We would like to thank the Doctors and staff of our institute, and the members of our University, for their continuous support and guidance.

References

- [1] H. Wang, T. Zhou, C. Zhang, H. Li, M. Lü, Inflammatory fibroid polyp: an unusual cause of abdominal pain in the upper gastrointestinal tract: a case report, *Open Med.* 15 (Mar (1)) (2020) 225–230, <http://dx.doi.org/10.1515/med-2020-0033>.
- [2] F. Fleres, C. Mazzeo, A. Ieni, M. Rossitto, E. Cucinotta, Gastric inflammatory fibroid polyp tumor with acute intestinal obstruction—Vanek's tumor can mimic a giant gastrointestinal stromal tumor or a gastric lymphoma, *J. Vis. Surg.* (2018) 4, <http://dx.doi.org/10.21037/jovs.2018.02.09>.
- [3] R.A. Agha, M.R. Borrelli, R. Farwana, K. Koshy, A. Fowler, D.P. Orgill, For the SCARE Group, The SCARE 2018 statement: updating consensus surgical CAse REport (SCARE) guidelines, *Int. J. Surg.* 60 (2018) 132–136.
- [4] F. Inayat, A. Ur Rahman, A. Wahab, A. Riaz, E. Zahid, P. Bejarano, R. Pimentel, Gastric inflammatory fibroid polyp: a rare cause of occult upper gastrointestinal bleeding, *J. Investig. Med. High Impact Case Rep.* 8 (June) (2020), <http://dx.doi.org/10.1177/23247096209368>.
- [5] E.J. Gong, D.H. Kim, Endoscopic ultrasonography in the diagnosis of gastric subepithelial lesions, *Clin. Endosc.* 49 (September (5)) (2016) 425, <http://dx.doi.org/10.5946/ce.2016.065>.