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Fundic Gland Polyps: An Unusual Presentation in a Female Patient with Prolonged Proton-Pump Inhibitors Use

Semlali R[1*], Mekondji, G[2]

[1]Department of Gastroenterology, CHU Mohammed VI Marrakech, Morocco
[2]Department of Gastroenterology, CH Châteauroux, France

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***Corresponding author:** Semlali R
Department of Gastroenterology, CHU Mohammed VI Marrakech, Morocco

Abstract **Case Report**

Fundic gland polyps (FGPs) are the most common gastric polyps, typically arising in the oxyntic mucosa of the stomach. They are often incidental findings during upper gastrointestinal endoscopy and are usually asymptomatic. FGPs can occur sporadically or in association with familial adenomatous polyposis (FAP). Sporadic FGPs are more prevalent in individuals on long-term proton pump inhibitor (PPI) therapy, suggesting a link between acid suppression and polyp formation. Management strategies depend on the polyp size, number, and histologic features. Small, asymptomatic, non-dysplastic FGPs require no specific intervention, whereas large or dysplastic lesions warrant endoscopic removal and surveillance. This review explores the pathogenesis, clinical implications, and optimal management approaches for fundic gland polyps.

Keywords: Fundic gland polyps, familial adenomatous polyposis, upper gastrointestinal endoscopy, proton pump inhibitors, dysplasia, anemia.

INTRODUCTION

Gastric polyps are abnormal growths that arise from the mucosal or submucosal layers of the stomach, frequently detected incidentally during upper gastrointestinal endoscopy. Although the majority of gastric polyps are benign, certain types, particularly adenomatous polyps, may present a risk of dysplasia and have the potential for progression to invasive gastric carcinoma. Gastric polyps can be classified into several types, including hyperplastic, fundic gland, and adenomatous polyps, each associated with differing levels of malignancy risk [1].

Fundic gland polyps (FGPs) account for approximately 66% of all gastric polyps [2]. While these polyps are typically non-syndromic, they may be linked to certain genetic syndromes, such as familial adenomatous polyposis (FAP), gastric adenocarcinoma, and proximal polyposis of the stomach (GAPPS).

Due to the high prevalence of fundic gland polyps (FGPs) in upper gastrointestinal endoscopic examinations, nearly every gastroenterologist encounters patients with one (or more) of these lesions. In most patients, FGPs are an incidental finding of little clinical significance and their histological appearance is innocuous [3].

However, there are occasional instances where fundic gland polyps (FGPs) present significant clinical challenges, necessitating careful evaluation and management. The case presented in this article is an example of such instances.

CASE REPORT

Patient M.S., aged 57, presented to our hospital with a history of progressively worsening anemia over the past six months. She complained of persistent fatigue, shortness of breath and hairloss.

The patient history reveals no gastrointestinal disorders except gastro-oesophagal reflux disease (GERD) for which she has been taking proton pump inhibitors (PPIs) for two years. There was no chronic external bleeding and no autoimmune diseases. Dietary interrogation found no evidence of malnutrition.

Physical examination revealed visible cutaneous and mucosal pallor, diffuse moderate alopecia and brittle nails. Cardiovascular examination found no abnormalities except a systolic heart murmur.

Abdominal examination was normal, and rectal examination found no blood. A complete blood count was performed, revealing profound microcytic anemia, with a Hb level of 7.4g/dl. White blood cells levels were normal and platelet levels were elevated.

Other laboratory tests were then performed to determine the anemia's origin: Ferritin levels were low at 6 ng/ml, with no evidence of inflammation, as C reactive protein and erythrocyte sedimentation rate (ESR) were normal. Transferrin staturation was low at 4%.

The diagnosis of iron deficiency anemia was established. As part of the etiological assessment, a gynecological examination was performed, revealing no abnormalities.

An EGD was then performed finding a large tumor of the greater curvature, that seemed to follow the gastric folds. This tumor was ulcerated and necrotic in some spots, and measured around 6 cm. A multitude of fundic gland polyps was also found in the fundus. Multiples biopsies of the tumor were performed (Figures 1, 2 and 3).

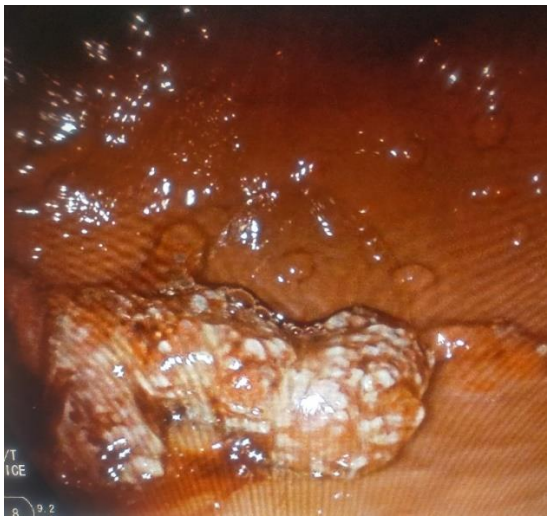

Figure 1: Voluminous tumor of the greater curvature

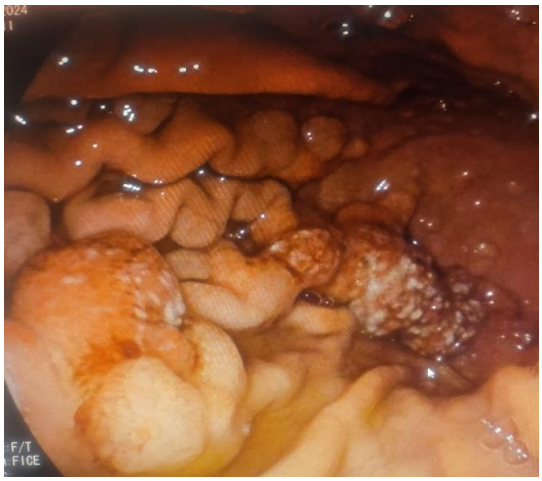

Figure 2: The tumor appears as though it's following the gastric folds

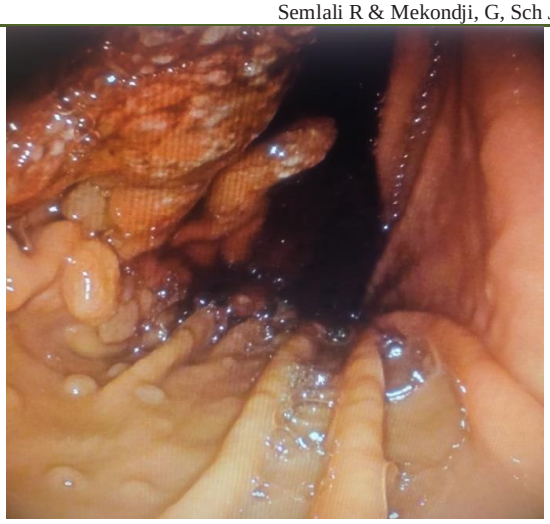

Figure 3: The tumoral aspect in retrovision

A thoraco-abdomino pelvic scan was performed, finding only a thickening of the greater curvature wall, with no infiltration and no metastases.

Biopsies came back negative, and a second series of biopsies was performed also coming back negative. The patient was thus referred to a specialized center where an endoscopic ultra-sound was performed finding no evidence of deep invasion of the gastric wall. The tumour was consequently removed using loop polypectomy. Multiple hemostatic clips were placed to prevent bleeding.

Histological examination concluded to a voluminous fundic gland polyp, with metaplasic tissue in some spots, and no sign of malignity or dysplasia. No further examination was necessary due to the benign nature of the lesion. No follow-up was necessary apart from 3 year interval EGD to monitor the metaplasia.

The patient's evolution was favourable, with no per or post-procedural bleeding, and resolution of anemia in the six-month follow-up consultation.

DISCUSSION

The prevalence of gastric polyps in the general population is estimated at approximately 2%, though reported rates vary. These polyps are most frequently detected incidentally during esophagogastroduodenoscopy (EGD). Polypoid lesions are identified in approximately 6% of EGD procedures [1].

The most common types of gastric polyps include fundic gland polyps, which exhibit dilated and irregularly budded fundic glands; hyperplastic polyps, characterized by marked foveolar hyperplasia; and adenomatous polyps, which demonstrate low-grade glandular dysplasia [4].

Fundic gland polyps are epithelial polyps that may occur sporadically or in association with proton pump inhibitor (PPI) use or hereditary syndromes such as familial adenomatous polyposis (FAP).

Sporadic fundic gland polyps are most commonly located in the gastric body and fundus. They are typically sessile, smooth, and hyperemic, with a size range of 1 mm to 8 mm.

A prospective cohort study demonstrated that the risk of developing fundic gland polyps increases with the duration of proton pump inhibitor (PPI) use, with a reported relative risk increase of 17 over a 10-year period [5].

Another study involving 186 individuals with gastric polyps found that more than 5 years of PPI use was associated with an increased incidence of fundic gland polyps [6].

Fundic gland polyps associated with FAP are numerous, and up to 40% may be dysplastic [7]. On the other hand, sporadic fundic gland polyps very rarely progress to severe dysplasia or adenocarcinoma.

Accurate diagnosis of a polyp based solely on its endoscopic appearance is challenging. Therefore, histopathological assessment through biopsy of both the polyp and the surrounding mucosa is essential. Due to the potential for sampling error during biopsy, polypectomy should always be considered. Various techniques are available for biopsy or polyp removal, including hot and cold forceps, hot and cold snare, endoscopic mucosal resection (EMR), and endoscopic submucosal dissection (ESD) [8].

In cases of fundic gland polyps with a history of chronic proton pump inhibitor (PPI) use, discontinuation of PPI therapy is recommended when feasible. For lesions measuring greater than 5 mm to 10 mm on initial

esophagogastroduodenoscopy (EGD), a follow-up EGD should be performed after one year [1].

Most fundic gland polyps are benign, measure less than 1 cm and do not require any specific management when asymptomatic. However, in some rare cases, for example when these polyps are > 1cm in diameter, have dysplasia, or cause bleeding, polypectomy might be necessary. Bleeding in particular is particularly rare in the case of fundic gland polyps. Very few cases of bleeding caused by fundic gland polyps have been reported in the literature. Tanaka *et al*., [9] described the case of a 37 year-old woman presenting with hematemesis secondary to multiple gland polyps. Discontinuation of PPIs led to the resolution of the bleeding. Our patient's case is probably such an example, though there was no external bleeding.

CONCLUSION

The management of fundic gland polyps primarily involves endoscopic evaluation and histopathological assessment to determine their clinical significance. In sporadic cases without dysplasia, surveillance is generally sufficient. However, in patients with a history of prolonged proton pump inhibitor (PPI) use, discontinuation should be considered when feasible. For larger polyps (>5–10 mm), follow-up esophagogastroduodenoscopy (EGD) is recommended to monitor for progression. In select cases, polypectomy may be warranted to mitigate the risk of sampling error and ensure accurate diagnosis.

Although fundic gland polyps typically present as small, sessile, smooth, and hyperemic lesions, unusual endoscopic features may occasionally be observed. Atypical presentations include larger polypoid lesions, ulcerated or erosive surfaces, or the presence of multiple confluent polyps, which may raise suspicion for alternative diagnoses such as dysplasia, gastric adenomas, or syndromic polyposis. In such cases, a thorough histopathological evaluation and closer endoscopic follow-up are essential to exclude malignant transformation or underlying hereditary conditions.

BIBLIOGRAPHY

1. Arteaga, C. D., & Wadhwa, R. (2025). Gastric Polyp. [Updated 2024 Oct 9]. In: StatPearls. Treasure Island (FL): StatPearls Publishing; 2025 Jan.
2. Kővári, B., El Naili, R., Pereira, D. V., Kumarasinghe, P., De Boer, W. B., Jiang, K., ... & Lauwers, G. Y. (2022). Fundic gland polyps related to diverse aetiologies show subtle morphological differences: a multicentre retrospective study. *Histopathology*, *80*(5), 827-835.
3. Spiegel, A., Stein, P., Patel, M., Patel, R., & Lebovics, E. (2010). A report of gastric fundic gland polyps. *Gastroenterology & hepatology*, *6*(1), 45-48.
4. Early, D. (2023). Diagnosis and approach to gastric polyps. *Gastrointestinal endoscopy*, *98*(4), 618-620.
5. Kroupa, R., Pavlik, T., Konecny, S., Packova, B., Dastych, M., Pavlovsky, Z., & Dolina, J. (2023). The association between duration of and indications for proton pump inhibitor use and risk of gastric polyps. *European Journal of Gastroenterology & Hepatology*, *35*(8), 829-835.
6. Gao, W., Huang, Y., Lu, S., & Li, C. (2021). The clinicopathological characteristics of gastric polyps and the relationship between fundic gland polyps, Helicobacter pylori infection, and proton pump inhibitors. *Annals of palliative medicine*, *10*(2), 2108114-2102114.
7. Kővári, B., El Naili, R., Pereira, D. V., Kumarasinghe, P., De Boer, W. B., Jiang, K., ... & Lauwers, G. Y. (2022). Fundic gland polyps related to diverse aetiologies show subtle morphological differences: a multicentre retrospective study. *Histopathology*, *80*(5), 827-835.
8. Chen, W. C., & Wallace, M. B. (2016). Endoscopic management of mucosal lesions in the gastrointestinal tract. *Expert Review of Gastroenterology & Hepatology*, *10*(4), 481-495.
9. Tanaka, M., Kataoka, H., & Yagi, T. (2019). Proton-pump inhibitor-induced fundic gland polyps with hematemesis. *Clinical journal of gastroenterology*, *12*(2), 193-195.