

An Atypical Case of a Pyloric Gland Adenoma in the Gallbladder

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Abstract

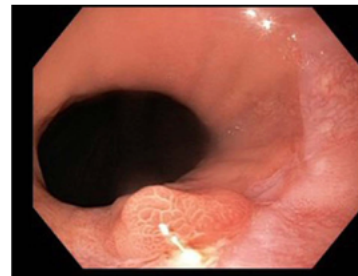
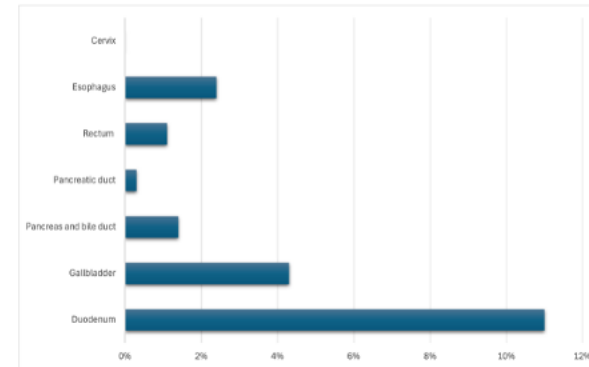
- Pyloric gland adenomas (PGA) are rare neoplasms, accounting for approximately 3% of all gastric epithelial polyps usually arising in the gastric antrum but can occur anywhere in the GI tract.
- Epidemiologically, a higher prevalence has been observed in females compared to males.² These lesions are precancerous lesions with as high as 47% converting to adenocarcinomas.
- This case highlights a rare presentation of pyloric gland adenoma in a young, otherwise healthy male without known risk factors or a family history of gastrointestinal syndromes which has not been widely documented in the literature. This underscores the importance of maintaining clinical suspicion even in atypical patient populations. Timely resection and surveillance remains the gold standard to prevent progression to adenocarcinoma**

Case Presentation

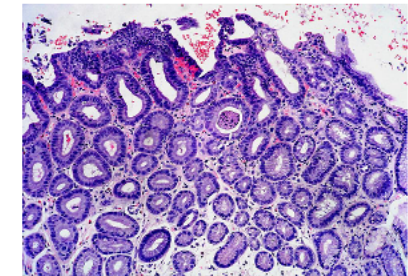
- History of Presenting Illness:** 36-year-old Hispanic male presented to the Emergency Department with 1 day of abdominal pain, nausea, and vomiting. His pain awoke him from his sleep after eating 6 hours prior, **began in his chest and then migrated to the epigastrium and lower abdomen.** He had 3 bouts of vomitus and reported subjective fevers and chills.
 - Past Medical History:** Denied
 - Past Surgical History:** Denied
 - Medication use:** Denied
 - Social History:** No prior alcohol history.
 - Physical examination:**
 - Vital Signs: Afebrile, HR 78, BP 146/81, SaO2 100% RA.
 - Abdominal Exam: Abdomen was soft and non-distended. There was **guarding and tenderness to palpation of the right upper quadrant (RUQ).** The rest of the exam was unremarkable.
 - Laboratory Data:**
 - Leukocytosis** of 15.3x10³/μL (5.2-12.4) with a **neutrophil predominance:** 85.0% (40.0-74.0%) with **no left shift** - immature granulocytes 0.4% (0.0-5.0%). Absolute neutrophil count of 13.01x10³/μL (1.90-8.00).
- | | |
|----------------------------------|-------------------|
| Lactic acid 1.4 mmol/L (0.7-2.1) | Troponin I 0.013, |
| AST 26, ALT 28, ALK PHOS 78, | Albumin 4.7 |
| Total creatine Kinase 162, | Total protein 8.2 |
| | Lipase 86. |
- Ultrasound:** Distended gallbladder with multiple gallstones, No pericholecystic fluid, Positive sonographic Murphy sign. **Hypoechoic nodule seen in the right liver lobe measuring 1.9 x 1.5 cm as well as a possible 0.42cm gallbladder polyp.**
 - The patient was diagnosed with acute cholecystitis and was consented for laparoscopic cholecystectomy. The patient underwent cholecystectomy and a sample was sent for pathological analysis. This sample had significant findings of acute and chronic hemorrhagic cholecystitis and a **small pyloric gland adenoma.** The patient was stable and discharged the same day. The patient was later lost to follow up.

Discussion

Pyloric gland adenomas (PGAs), are most found in the gastric antrum. However, they can occasionally occur at other sites in the gastrointestinal (GI) tract, though these cases are rare. The frequencies of PGAs in other locations is summarized in the graph below showing data from a Vieth and Montgomery study [1]



Representative image of pyloric gland adenoma [3]



Histology of PGA without dysplasia [2]

PGAs are precancerous lesions, occurring due to gastric metaplasia secondary to chronic inflammation of the epithelium of the intended organ. Studies indicate that up to 47% can eventually progress to adenocarcinomas. The risk of malignant transformation depends on the size of the adenoma and the degree of dysplasia with high-grade cases developing into intramucosal or invasive carcinoma, further supporting the importance of regular monitoring.

PGAs are often asymptomatic and are typically detected incidentally during routine endoscopic or colonoscopic evaluations. In this case, the patient initially presented with symptoms suggesting cholecystitis, which led to the decision to perform an abdominal ultrasound. This imaging study revealed a gallbladder polyp measuring 0.42 cm. However, it was the subsequent pathology report of the gallbladder specimen that allowed us to infer the lesion as a pyloric gland adenoma. Considering this, clinicians should maintain a high level of suspicion for PGAs, particularly when encountering unexplained GI lesions in patients outside the typical demographic.

The treatment for PGAs generally involves endoscopic resection, which not only removes the lesion but also allows for a pathological assessment to rule out malignancy. Given the potential for malignant transformation, surveillance endoscopy is recommended after resection to monitor for recurrence or progression to adenocarcinoma.^[1] The risk of malignancy is primarily influenced by lesion size and the degree of dysplasia, with larger or more dysplastic lesions requiring closer follow-up.

Acknowledgements

- Vieth M, Montgomery EA. Some observations on pyloric gland adenoma: an uncommon and long ignored entity! *J Clin Pathol*. 2014 Oct;67(10):883-90. doi:10.1136/jclinpath-2014-202553. PMID:25092673.
- Cartelle, Anabel & Holzwanger, Erik & Igbiniedon, Samuel & Mahmood, Sultan & Rosenberg, Harry & Berzin, Tyler & Sawhney, Mandeep & Gabr, Moamen & Pleskow, D.. (2023). Pyloric Gastric Adenoma: Endoscopic Detection, Removal, and Echoendosonographic Characterization. *ACG Case Reports Journal*. 10. e01229. 10.14309/crj.0000000000001229.
- Srivastava S. Pyloric gland adenoma. *PathologyOutlines.com website*. <https://www.pathologyoutlines.com/topic/stomachpyloricglandadenoma.html>. Accessed December 13th, 2025.