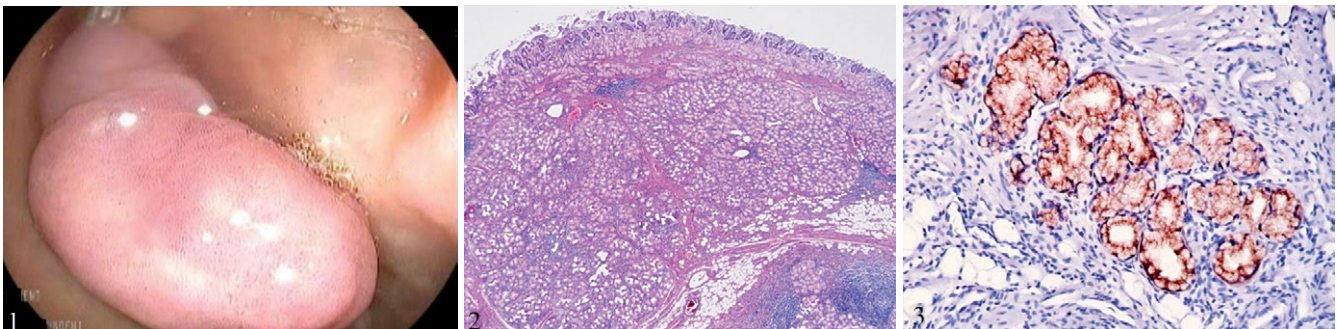


Brunner's Gland Hyperplasia – a Rare Cause of Gastrointestinal Bleeding

Ion Bancila, Gabriel Becheanu, Mona Dumbrava, Roxana Costache, Cristian Gheorghe

Fundeni Clinical Institute, Gastroenterology Department, Bucharest, Romania



A 76-year-old male patient was admitted with dark stools and anemia. He did not complain of anorexia, weight loss or abdominal pain. Upper gastrointestinal endoscopy revealed a large pedunculated polyp with superficial erosions on the anterior wall of the duodenal bulb. After the correction of anemia and proton pump inhibitor therapy, snare polypectomy was performed, preceded by the prophylactic placement of a hemostatic clip at the base of the polyp (Fig.1).

The histologic examination revealed prominent intra- and submucosal Brunner's glands hyperplasia, with large lobules separated by fibromuscular septae, lymphoid aggregates and fatty tissue (Fig.2, H&E, x100). Occasionally Brunner glands showed mild dilation but no atypia or mitosis were found. The PAS stain was positive (not shown) and immunohistochemistry showed positive reaction for MUC6 (Fig.3) and focal MUC5 positive foveolar cells (not shown).

Small bowel polyps are relatively uncommon, appear mostly in the duodenum and are usually benign. Brunner's gland polyps are usually single, may grow up to 3 cm and are in most patients found incidentally at endoscopy, although they may cause abdominal pain by intussusception or iron-deficiency anemia secondary to mucosal ulcerations [1, 2].

It has been postulated that Brunner's gland polyps represent an adaptive response to the acidic contents eliminated from the stomach, to chronic *Helicobacter pylori* infection, a compensatory mechanism for pancreatic exocrine insufficiency or just normal variations, but evidence for each of these mechanisms is scarce [3-5].

Brunner's gland hyperplasia/hamartoma represents a hyperplastic proliferation of mucin-secreting duodenal glands, forming a nodular/polypoid aspect of the duodenal mucosa

[6]. Sometimes they are large (more than 2cm), pedunculated and may represent a prolapsed lesion of preexisting hyperplasia.

Occasionally, Brunner's gland hamartomas may display subtle nuclear atypia (when they may be called adenomas). A histological marker is the strong immunoreactivity for MUC6, while the expression of MUC5 is of a patchy type.

Corresponding author: Gabriel Becheanu, gbecheanu@yahoo.com

Conflicts of interest: None to declare.

REFERENCES

1. Qayed E, Wehbi M, Rutherford R. Gastrointestinal bleeding from Brunner gland hamartoma. *Clin Gastroenterol Hepatol* 2011;9:e4-e5. doi:[10.1016/j.cgh.2010.08.013](https://doi.org/10.1016/j.cgh.2010.08.013)
2. Petersen JM, Felger TS, Goldstein JD. Gastrointestinal intussusception secondary to a giant Brunner gland hamartoma. *Gastroenterol Hepatol (NY)* 2008;4:471-473.
3. Tottrup A, Rokkjaer M, Kruse A, Poulsen SS, Jacobsen NO. Excessive nodular hyperplasia of Brunner glands associated with gastric hypersecretion and lipomatous atrophy of the pancreas. *Scand J Gastroenterol* 1999;34:541-544.
4. Kurella RR, Ancha HR, Hussain S, Lightfoot SA, Harty R. Evolution of brunner gland hamartoma associated with *Helicobacter pylori* infection. *South Med J* 2008;101:648-650. doi:[10.1097/SMJ.0b013e318172435a](https://doi.org/10.1097/SMJ.0b013e318172435a)
5. Stolte M, Schwabe H, Prestele H. Relationship between diseases of the pancreas and hyperplasia of Brunner's glands. *Virchows Arch A Pathol Anat Histol* 1981;394:75-87.
6. Riddell R, Jain D. *Lewin Gastrointestinal Pathology and its Clinical Implications*. 2nd edition. Volume 2. Wolters Kluwer 2014:1327-133.