

# Tubulovillous adenoma of stomach: A cause for intussusception - Report of an unusual case with brief literature review

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## ABSTRACT

In the stomach, benign tumors are not common. Even when they do occur, they are usually considered as premalignant lesions with a risk of transformation to malignant ones. Tubulovillous adenomas of the stomach are rare. However, these tumors are being diagnosed with increasing frequency due to more widespread use of endoscopy. We present an unusual case of a large tubulovillous adenoma of the stomach. The partial gastrectomy specimen showed a large polypoidal growth at the greater curvature of the stomach. The patient is symptom-free, after 2 years of follow-up.

**Key words:** Benign tumors, stomach, tubulovillous adenoma

## INTRODUCTION

Benign gastric tumors like adenomas are uncommon. They constitute only 5–10% of all tumors of the stomach.<sup>[1-3]</sup> Histopathological examination of gastric adenomas shows tubular, villous, or tubulovillous architecture. Small sized tumors are usually tubular, whereas large tumors are more likely to be villous. Adenomas are usually seen in a background of chronic atrophic gastritis and intestinal metaplasia.<sup>[4,5]</sup> Although adenomas are themselves benign, nevertheless some of them can become malignant. Therefore, early diagnosis, correct treatment, and proper long-term follow-up are important. The detection rate of these benign tumors is increasing due to a higher level of clinical awareness, and the rising availability

and application of various diagnostic tools, such as gastrointestinal endoscopy.<sup>[6-9]</sup>

We present an unusual case of large tubulovillous gastric adenoma, which was successfully excised at our center.

## CASE REPORT

A 50-year-old woman presented with a history of on and off vomiting for 5 months. Vomiting was more frequent, occurring nearly 3–4 times/day, for the last 1-week. The vomitus was nonbilious and did not contain any blood. Although there was no loss of appetite, she complained of early satiety for the last 1-month. She also reported some degree of weight loss, though she was unable to quantify it.

There was no history of abdominal distension, melena, or hematemesis. There were no symptoms of urinary bladder disturbance. She did not complain of any

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cough, breathlessness, or fever. She was not known to be hypertensive or diabetic.

Examination of the abdomen revealed a soft, irregular mass present in the epigastric region, which was moving with respiration. There was no hepatomegaly.

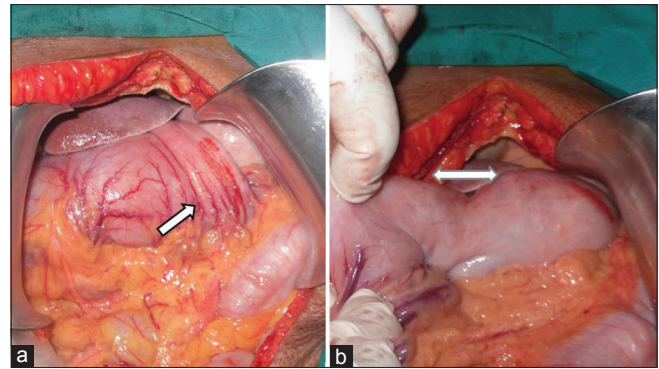
Routine investigations were normal. Upper gastrointestinal endoscopy showed the presence of multiple sessile polyps presenting as a large polypoidal growth at the greater curvature of the stomach. The biopsy was reported as gastric tubulovillous adenoma. Total colonoscopy did not reveal any abnormality or any polyp in the colon.

### Intra-operative findings and procedure

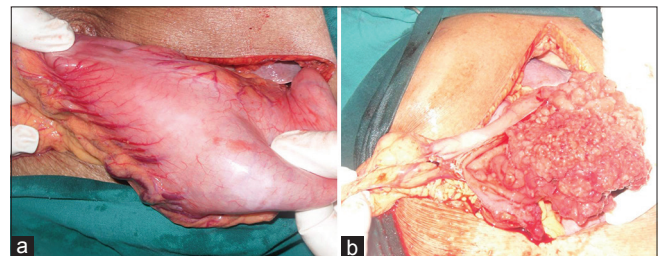
Since the histopathology report was a tubulovillous adenoma, we planned for partial gastrectomy with a 3 cm margin all around. Under general anesthesia, an upper midline incision was given. Intussusception of the mass toward the fundus was noticed after opening the abdomen [Figure 1a]. By gentle manipulation, the intussusception was reduced [Figure 1b]. The intraluminal growth was then felt in the body of the stomach, at the greater curvature [Figure 2a]. The fundus, cardia, and gastro-esophageal junction were free of the tumor. There were no peri-gastric lymph nodes. Omental deposits were also not noted. The rest of the bowel, peritoneal surface and pelvis were normal. There was no free fluid in the abdominal cavity. Uterus appeared to be atrophic.

After delineating the free border, an incision was given on anterior surface of the stomach along its whole length, 3 cm away from the growth. This enabled us to visualize the whole of the growth over the mucosal surface of stomach [Figure 2b]. Partial gastrectomy was done with a 3 cm margin all around the tumor with intact proximal, distal, and lesser curvature of the stomach [Figure 3a]. The proximal and distal ends were apposed and sutured transversely in two layers to prevent narrowing of the lumen of the stomach [Figure 3b].

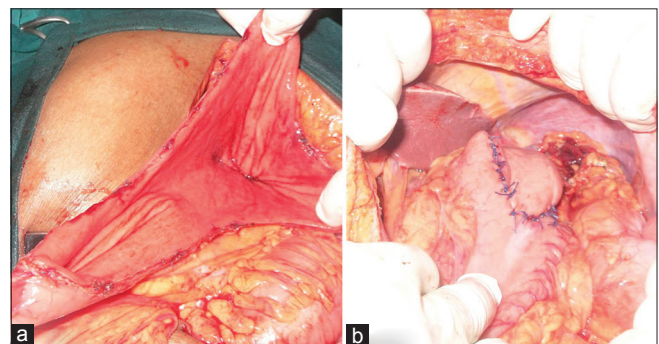
The gross resected specimen measured 11 cm × 8 cm and showed multiple sessile polyps, the largest being 1 cm in diameter [Figure 4]. Histopathological examination of the tumor revealed a tubulovillous adenoma comprising irregular, branching glands with a focal villous pattern that was lined by stratified cuboidal epithelium, which in some areas appeared mildly dysplastic. There was no infiltration of the muscularis mucosae [Figure 5]. The surrounding mucosa showed evidence of chronic atrophic gastritis and focal intestinal metaplasia. There was no evidence of *Helicobacter pylori* colonization. The resected margins were free of the tumor.



**Figure 1:** (a) Intussusception of the mass towards the fundus region of stomach. (b) Stomach after reduction of intussusception



**Figure 2:** (a) Intra luminal growth in the body of stomach. (b) Polypoidal growth over mucosal surface of stomach



**Figure 3:** (a) Remnant of stomach after resection of the growth. (b) Stomach after proximal and distal ends were apposed

### Postoperative period

Postoperative period was uneventful. Ryle's tube was removed on the 4<sup>th</sup> postoperative day, and liquid diet was started. The patient was discharged on 7<sup>th</sup> postoperative day.

The patient is currently under follow-up and has remained asymptomatic, 2 years following the surgery.

## DISCUSSION

Gastric adenomas are described as circumscribed, polypoidal lesions composed of either tubular and/or villous structures lined by dysplastic epithelium. The majority of gastric adenomas are located in the antrum. Endoscopy usually shows a solitary, exophytic sessile, or pedunculated mass. Rarely it may show a flattened or slightly depressed lesion.





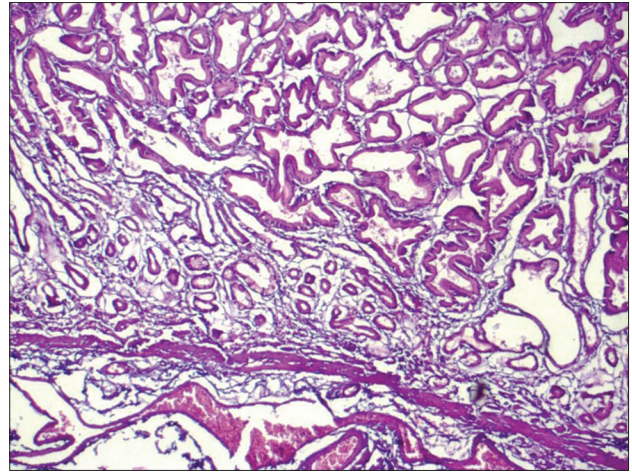
**Figure 4:** Gross resected specimen of polypoidal growth

These tumors are usually asymptomatic.<sup>[4]</sup> In our patient, however, the large tubulovillous adenoma was causing intussusception. This may explain her frequent vomiting.

Tubulovillous adenomas are an uncommon variety of benign gastric adenomas. In a Korean study of gastric polyps, tubulovillous adenomas constituted only 2.4%.<sup>[3]</sup> Because of the rarity of adenomas in the upper gastrointestinal tract, the clinical, radiologic, and pathologic features have not been completely defined.<sup>[8]</sup> They originate from the columnar epithelium.<sup>[6,7]</sup> They are frequently multiple.<sup>[6]</sup> The diagnosis is established with the help of the endoscopic investigations and pathologic examination of the biopsy specimen.<sup>[7]</sup> Recently, Dudani *et al.* reported a single giant adenomatous polyp of stomach measuring 9 cm.<sup>[4]</sup> Our patient likewise had an adenoma that measured 11 cm × 8 cm and was comprised multiple sessile polyps.

Adenomas are considered to be premalignant lesions.<sup>[2]</sup> Adenomas of the stomach and duodenum are more prone to undergo malignant transformation than colonic adenomas. It is possible to encounter dysplasia and carcinoma in the vicinity of an adenomatous polyp. There is also a 30% risk of identifying a synchronous adenocarcinoma in another part of the stomach during a polypectomy.<sup>[5,6]</sup> Hence, it is essential to examine surrounding gastric mucosal tissue and take multiple biopsies to rule out the possible malignant transformation. Intermittent endoscopic follow-up is required to look for the possibility of recurrence at the polypectomy site and to detect development of malignancy in the remaining gastric mucosa after polypectomy.<sup>[7,9]</sup>

The first line of treatment in villous tumors is to excise using an endoscopic approach. Endoscopic snare resection, laser ablation, or endoscopic mucosal resection (EMR) are some of the methods advocated. Successful endoscopic resection of pedunculated adenoma is possible. Sessile lesion requires EMR, which can provide an en-bloc



**Figure 5:** Histopathology of tubulovillous adenoma confined to mucosa (H and E, ×40)

specimen.<sup>[2,10]</sup> Endoscopic sub mucosal dissection (ESD) is a new technique, which can remove a larger lesion. This is possible when the lesion is limited to the mucosa.<sup>[2,10]</sup> ESD can be used in stomach and colorectum. ESD seems to be safer in gastric location because of the thickness of the wall and larger lumen compared to the colorectum.<sup>[2,10]</sup>

However, the feasibility of endoscopic removal depends on the size and the location of the tumor. Surgery is indicated for large tumors. Traditional open procedures include local and wedge resections or gastrectomies. New surgical techniques include laparoscopic or combined laparoscopic-endoscopic approach with or without intra organ surgery. The results of these methods are comparable to that of open surgery. The advantages of these new methods of treatment include reduced pain, shorter duration of recovery, better immune responses, and earlier discharge.<sup>[11]</sup>

Because of their recurrence and malignant potential, the removal of villous tumors should be complete and en-bloc with free margin. In our patient, the size of the tumor was large, so we opted for partial gastrectomy even though the preoperative biopsy was reported as benign.

## CONCLUSION

The present case is an uncommon large tubulovillous adenoma presenting with intussusception, which was surgically resected with a successful outcome.

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**Conflicts of interest**

There are no conflicts of interest.

**REFERENCES**

1. Jung JT. Gastric polyps and protruding type gastric cancer. *Clin Endosc* 2013;46:243-7.
2. Toughrai I, Mellouki I, Kamaoui I, Laalim SA, Majdoub KI, Mazaz K, *et al.* Surgical management of large villous tumours. *J Case Rep* 2013;3:24-9.
3. Yoon WJ, Lee DH, Jung YJ, Jeong JB, Kim JW, Kim BG, *et al.* Histologic characteristics of gastric polyps in Korea: Emphasis on discrepancy between endoscopic forceps biopsy and endoscopic mucosal resection specimen. *World J Gastroenterol* 2006;12:4029-32.
4. Dudani S, Sahai K, Rathi KR, Mehta R. Giant adenomatous polyp of stomach: Case report of a rare tumor with unusual features. *J Dig Endosc* 2014;5:27-9.
5. Day DW, Jass JR, Price AB, Shepherd NA, Sloan JM, Talbot IC, *et al.*, editors. *Morson and Dawson's Gastrointestinal Pathology*. 4<sup>th</sup> ed. USA: Blackwell Science; 2003. p. 162.
6. Jang CR, Choi SR, Cho JH, Koo YH, Han SH, Ryu SH, *et al.* A case of giant gastric villous tumor with carcinomatous change. *Korean J Gastroenterol* 2005;45:431-5.
7. Oymaci E, Coskun A, Ucar D, Sari E, Erkan N, Yildirim M, *et al.* Gastric outlet obstruction due to a giant antral polyp which have malignant transformation. *Int J Case Rep Images* 2014;5:382-6.
8. Carmack SW, Genta RM, Graham DY, Lauwers GY. Management of gastric polyps: A pathology-based guide for gastroenterologists. *Nat Rev Gastroenterol Hepatol* 2009;6:331-41.
9. Gencosmanoglu R, Sen-Oran E, Kurtkaya-Yapicier O, Tozun N. Antral hyperplastic polyp causing intermittent gastric outlet obstruction: Case report. *BMC Gastroenterol* 2003;3:16.
10. Fujishiro M, Yahagi N, Kakushima N, Kodashima S, Ichinose M, Omata M. Successful endoscopic en bloc resection of a large laterally spreading tumor in the rectosigmoid junction by endoscopic submucosal dissection. *Gastrointest Endosc* 2006;63:178-83.
11. Goh PM, Lenzi JE. Benign tumors of the duodenum and stomach. In: Holzheimer RG, Mannick JA, editors. *Surgical Treatment: Evidence-Based and Problem-Oriented*. Munich: Zuckschwerdt; 2001. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK6948/>. [Last accessed on 2013 Jun 28].