Gastric adenomyoma causing outlet obstruction

Adenomyoma of stomach is a rare condition that may or may not present with symptoms, often depending on the location of the tumor. Here, we present a case of gastric adenomyoma with pancreatic heterotopia in the pyloric region causing outlet obstruction. Clinically, radiologically, and histologically adenomyoma of the stomach may mimic gastric malignancy. Awareness of this lesion is necessary to avoid misdiagnosis of the condition.

Key words: Adenomyoma, gastric outlet obstruction, pancreatic heterotopia, pylorus, stomach

INTRODUCTION

Adenomyoma or myoepithelial hamartoma is a lesion with mainly two components-glandular or ductal structures and smooth muscle proliferation. It is considered to be a hamartoma. The most common locations of this type of tumor in the gastrointestinal tract are stomach (25–38%), duodenum (17–36%), and jejunum (15–21%).

In the stomach, the most common location is the antrum (85%). In the pyloric region, the incidence is 15%. Thickening of the wall leads to narrowing of the lumen and results in gastric outlet obstruction. The patient then may need surgical intervention.

CASE REPORT

A 55-year-old female patient presented with abdominal pain and vomiting of 5 months duration. Ultrasound examination of the abdomen showed superficial thickening of the pyloric region. On gastroscopic examination, the patient was found to have gastric outlet obstruction. At this time, a clinical diagnosis of carcinoma of the stomach was made. The patient underwent distal gastrectomy with gastrojejunostomy. We received the distal gastrectomy specimen with attached omentum [Figure 1].

The stomach measured 12.5 cm along the greater curvature and 3 cm along the lesser curvature. Omentum measured 8.5 cm × 4 cm × 1 cm. Cutting through the greater curvature, showed a diffuse, circumferential thickening of the wall at the pyloric region m/s 3.5 cm × 0.5 cm × 1 cm situated 1.5 cm from the distal resected end and 5 cm from the proximal resected end [Figure 2]. Adjacent mucosa appeared normal. No lymph nodes were identified in the perigastric region and in the omentum.

Microscopy from the thickened area of the pyloric region showed hyperplastic smooth muscle bundles. Embedded within these, were multiple foci of ductular structures of varying sizes surrounded by Brunner type of mucous glands [Figure 3]. The ductular structures were lined by columnar cells without stratification or atypia. Some of the ductular structures were cystically dilated and lined by flattened to cuboidal epithelium. Lobules of exocrine pancreatic tissue were seen in one area [Figure 4]. The adjacent pyloric mucosa was normal. No communication was demonstrated between the lesion and the surface mucosa. There was no evidence of malignancy even on extensive sampling. Proximal and distal resected margins were free of the lesion.
DISCUSSION

Adenomyoma can occur in any site. Cases have been reported in the gastrointestinal tract, hepatobiliary system, ovary and elsewhere. The most common location is the gastrointestinal tract especially stomach. In the stomach, the most common site is the gastric antrum.

The histological features of gastric adenomyoma were first described by Alsleben in 1903. Ling and Situ reported nine cases and Barnert et al. reported one case of gastric adenomyoma. The pathogenesis of gastric adenomyoma has not been fully elucidated. This lesion is believed to originate from primordial epithelial buds, which can differentiate into pancreatic or duodenal tissue. Adenomyoma is considered to be developmental in origin by some. In the opinion of Takeyama et al., adenomyoma is to be considered as a hamartoma composed of the abnormal mixture of endoderm-derived epithelial component and mesoderm-derived smooth muscle.

Adenomyoma of the stomach have been reported in all age groups. In a 1-month-old child, clinically it mimicked hypertrophic pyloric stenosis. A 72-year-old woman presented with epigastric pain with dyspeptic symptoms. The presenting symptoms depend on the location of the lesion. The usual symptoms of gastric adenomyoma are nausea, vomiting, ulceration and bleeding. In the pyloric region, it may cause gastric outlet obstruction. Gastric adenomyoma causing pyloric obstruction has been reported previously in a newborn female child. The lesion may also be an incidental finding during endoscopy or autopsy. Cases have been reported with jaundice in a case of adenomyoma of the ampulla of vater intussusception in a case of ileal adenomyosis.
Grossly, the lesion is seen as a diffuse thickening of the wall, and it is difficult to differentiate from adenocarcinoma of the stomach clinically and radiologically. In some cases, an opening has been present in the lesion grossly visible as a dimple, which communicates with the surface gastric mucosa. In the present case, only diffuse thickening of the wall was seen. There was no dimple or communication with the surface mucosa.

Under light microscope, the characteristic components are large and small ductal structures embedded in proliferated smooth muscle tissue. Some of the reported cases showed associated endocrine and exocrine pancreatic tissue or Brunner glands. In the present case, Brunner glands and exocrine pancreatic tissue were present, but no endocrine pancreatic tissue was present.

The histological differential diagnosis includes Brunner gland adenoma and adenocarcinoma. The abundance of Brunner glands will make Brunner gland adenoma a possibility; but, in that case, there will not be duct structures and pancreatic tissue. Histologically, the adenomatous structures lying deep in the smooth muscle may be misinterpreted as an invasive adenocarcinoma, but attention should be given to the benign nature of the lining epithelial cells. Contiguous occurrence of adenocarcinoma in adenomyoma of the stomach has also been reported in a case by Chapple et al.\(^2\)

**SUMMARY**

Although, the main cause of gastric outlet obstruction is malignancy of the stomach a rare occurrence of conditions like adenomyosis should also be considered in the differential diagnosis to avoid misdiagnosis and mismanagement.

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**REFERENCES**


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