INTRODUCTION
Duplications; relatively rare anomalies of the gastrointestinal tract, can be observed anywhere from the oral cavity to the rectum, with the ileum being the most common site. Only about 9% of gastrointestinal duplications are observed in the stomach, which usually present in infancy. The pathogenesis of gastrointestinal duplications is controversial. However, abnormal recanalisation after the solid epithelial stage of embryonic bowel development is thought to be the cause by the majority. Essential features of a gastric duplication cyst are reported by Rowling, he included that cyst wall is contiguous with the stomach; a surrounding coat of shared smooth muscle; common blood supply; and the lining of the cyst being alimentary tract epithelium. This case report is of an adult having gastric duplication cyst, who was treated with complete excision.

CASE REPORT
A 52-year-old woman presented with abdominal pain, which had been present occasionally for 2 years. She had no other significant past medical or surgical history. Physical examination and laboratory analysis were normal.

Upper gastrointestinal endoscopy revealed an ostium at a 2-cm distance to cardia with a diameter of 2.5x4 cm (Figure 1a). On ultrasonography there was a cystic mass between the stomach, spleen and the tail of the pancreas. Magnetic resonance imaging (MRI) demonstrated a 7 cm-sized cystic lesion, communicating with the greater curvature of the stomach and extending below medial to the spleen and then behind the pancreatic tail (Figure 1b).

The patient was operated and findings on exploration, were similar to those found on MRI (Figure 2a). After a few small vascular relations with pancreatic tail were tied, the cyst was easily got free with minimal traction. Complete excision of the cyst from the area of communication with the stomach was performed by a linear cutter. Histopathological examination of the specimen revealed, that the cyst wall was lined by oxintic-type mucosa with muscularis mucosae, and that on the external surface of the cyst, there was the normal muscularis propriae of the stomach (Figure 2b). These findings were consistent with those of gastric duplication cysts. Post-operative recovery was uncomplicated and the patient was discharged on the postoperative day 5.

DISCUSSION
Gastric duplications are much less common in adult population. Majority (67%) present in the first year of life and the most common presentations of this pediatric...
age group are an abdominal mass, symptoms of gastrointestinal obstruction or anemia. In adults, predominant symptoms are abdominal pain, bloating and nausea, but many other clinical presentations, such as; recurrent acute pancreatitis, gastrointestinal bleeding and perforation into peritoneum and adjacent structures with fistula formation have also been reported. Gastric duplications are almost two times more frequent in females than in males.4,5 This case was also a 52-year-old woman who presented with abdominal pain.

Gastric duplications may be cystic (82%) or tubular (18%). In most of the tubular duplications, there is a communication with the stomach, whereas no communication is found in most of the cystic forms. Most commonly gastric duplications are located along the greater curvature of the stomach, especially in the antrum.5 In 35-50% of cases with gastric duplications other congenital abnormalities, the most common of which are alimentary duplications, esophageal diverticula and spinal cord abnormalities are accompanied.4 In this case, the type of the duplication was cystic and communicating, and the communication was located at the greater curve in fundus and no additional congenital anomaly was detected. The histological features of the cyst wall excised, were in concordance with those of the gastric duplication cysts, as described by Rowling.3

Although in adults, some gastric duplication cysts may be asymptomatic, most are discovered incidentally with ultrasonography, computerized tomography (CT), or gastric endoscopy. As in most of the cases, the cyst is located along the greater curvature of the stomach, it may compress the adjacent organs such as; the pancreas, kidney, spleen and the adrenal gland. So, the differential diagnosis includes cysts derived from these organs, and gastric duplication cysts have been misdiagnosed as pancreatic pseudocyst, pancreatic mucinous cystadenoma and splenic cyst. CT, MRI and endoscopic ultrasonography may be helpful in differential diagnosis. But pre-operative diagnosis is difficult inspite of all advanced techniques of imaging and the definitive diagnosis requires findings at laparotomy with histopathological examination of the specimen.5,7 In this case, we made the differential diagnosis by demonstration of the communication between the cyst and the stomach with upper endoscopy and MRI, however, confirmation of the diagnosis was with operative findings and histopathological examination of the wall.

Surgery is the preferred treatment in the management of gastric duplication cysts. Pancreatitis, perforation, fistula, and bleeding from peptic ulcer developed in the cyst wall and rarely, malignancy may complicate conservative approaches. Complete excision of the gastric duplication cyst is recommended because of the potential risk for complications and malignant transformation of the cyst. Some other surgical approaches, such as mucosal stripping and marsupialisation are also reported, but these may result in a potentially unstable mucosa prone to complications.8,9 This case was treated with complete excision with no complications in the light of this knowledge.

In conclusion, gastric duplication cyst should be in the differential diagnosis of patients with abdominal symptoms or with cystic lesions in the upper abdomen found incidentally on radiological imaging modalities. Optimal treatment of the gastric duplication cyst is complete excision of the cyst.

REFERENCES