

Intraabdominal Gauze Plug Which Simulates Gastric Duplication

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SUMMARY

Gastric duplication (GD) is one of the rarest congenital abnormalities of gastrointestinal tract. The case ve report was diagnosed as having GD by means of radiology, ultrasonography and endoscopy, but the operation revealed that this was indeed a gaze plug forgotten during a previous operation.

Key Words: Gastric duplication, congenital abnormality.

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Duplications are rare congenital abnormalities which can be seen at any level of gastrointestinal tract.

Gastric duplication (GD) is one of the rarest to be encountered with among the other GI duplications. One of our patients was diagnosed as having GD by means of radiology, ultrasonography and endoscopy. The operation, however, proved that this was indeed due to a gauze plug which had been forgotten inside the abdomen during a previous operation. We wanted to discuss tihs case and review the common findings in both conditions.

CASE

Mrs. E.T., a 30 years-old housewife (Protocol No 17802/86 TYIH Ankara) who had dyspeptic complaints was diagnosed as having duodenal ulcer 4 years ago. She had an operation (Bilateral TV+pyloroplasty+HMPP) after which she remained symtomless for 5 or 6 months. The sym-

ÖZET

Gastrik duplikasyon, gastrointestinal sistemin en nadir görülen konjenital anomalilerindenidir. Sunduğumuz vakada; radyolojik, ultrasonografik ve endoskopik olarak gastrik duplikasyon tanısı konulmuş, fakat yapılan cerrahi müdahalede bunun, evvelce geçirilen bir ameliyatta unutilan gazlı bez olduğu görülmüştür.

Anahtar Kelimeler: Gastriek duplikasyon konjenital anomali

T Kİ Tıp Bil Araş Dergisi C.8, S.4,1990,390-392

toms related to her primary illness had started again at the end of this period.

She was admitted to our hospital with complaints of abdominal pain nausea and vomiting in 1986.

Physical examination revealed nothing abnormal. Plain abdominal X-ray showed a soft tissue mass of about 8-9 cm. on the left of the umbilicus. Barium swallow studies of stomach and duodenum showed an image due to external pressure on the greater curvature.

Endoscopy revealed a protuberance towards the lumen of the greater curvature of the fundus. The corresponding mucosa was normal.

Ultrasonography showed a smooth, thin walled cystic lesion with a diameter of 9 cm. and a hypodens conglomerated mass inside (Figure 1).

The patient's general condition and biochemical investigations were normal. The cystic lesion

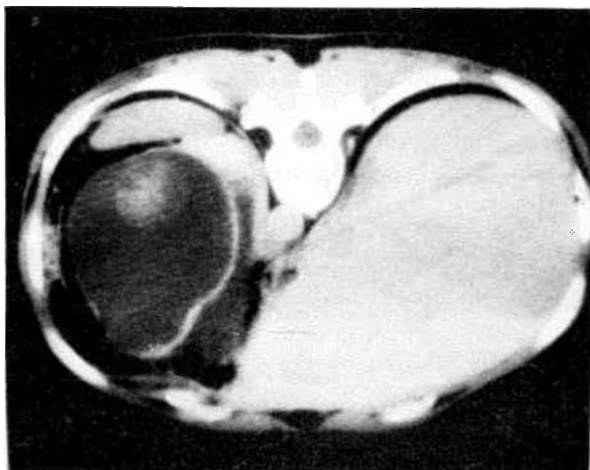


Figure 1. CT showing a smooth, thin walled cystic lesion with a diameter of 9 cm and a hypodense conglomerated mass inside.



Figure 2 The view obtained by radioopaque material which was given after the cystic fluid was aspirated

near the greater curvature was considered to be a duplication cyst of stomach with a hypoechoic region probably due to debris formation.

As a further investigation to reveal a possible communication of the cyst with the gastric lumen, to find out whether the fluid within the cyst was in-

deed the gastric fluid and to show the mucosa lining the cyst wall, Tc-99 pertechnetate scintigraphy was planned, but not performed because of financial problems.

Endoscopy was repeated to show this possible communication but no evidence for this was detected.

A needle (Olympus IK) which is routinely used in sclerosing therapy was inserted to pierce the gastric wall and to enter the cystic lumen. Cystic fluid was aspirated for analysis and then radioopaque material was given. The analysis of the fluid showed that it was of purulent character mixed with gastric fluid.

The contrast study did not show a communication between the cyst and stomach (Figure 2).

The overall findings obtained by radiology, endoscopy, computed tomography and fluid analysis suggested that the case was that of a GD and the patient was referred to surgery with this diagnosis.

Laparotomy revealed a fluctuating mass which was located near the upper part of the fundus of the stomach. It was surrounded by the anterior wall of the fundus, the diaphragm, greater omentum and the splenic flexura of the colon.

Puncture of the mass brought about a viscous purulent material. When the mass was dissected, a gauze plug was discovered.

The lesion was, therefore, not due to a GD but to a gauze plug forgotten during the operation that the patient had undergone 4 years ago.

The abscess was drained and the operation ended.

DISCUSSION

Although foreign materials such as gauze plugs forgotten in the abdomen during operations give rather early symptoms, they may also give, late symptoms such as obstruction, fever and anemia after years. Since most of these materials are not radioopaque, it is difficult to demonstrate them radiologically. Plain abdominal x-rays may show an irregular gaseous appearance or fixed intestinal segments. Barium studies of the stomach, duodenum and colon may show an external pressure image to those viscera, however, these findings may be absent.

Ultrasound is the diagnostic procedure of major importance to demonstrate gauze plugs forgotten during abdominal operations. A prominent hyperechoic image can be seen surrounding this hyperechoic band (1).

In less than 15% of cases, a communication between the GD and gastric lumen can be seen (2).

GDs are reported as being easily diagnosed with the help of radiology, ultrasound, computed tomography in children if they are together with congenital abnormalities. In adults, however, this diagnose is difficult preoperatively. They can simulate leiomyomas or if located in pyloroduodenal region, hypertrophic pylorus. A case of carcinoid tumor in a GD has also been reported (3,4,5).

The plain abdominal X-rays may reveal a soft tissue mass in the left upper quadrant. Contrast studies of stomach and duodenum may reveal an external pressure image.

Endoscopy may reveal a protuberance towards the lumen covered with a normal or hyperemic mucosa. If the GD is communicated with gastric lumen, opening of the fistula can be seen.

Ultrasonography can reveal a cystic lesion near the fundus or antrum of the stomach which can contain a debris producing a hyperechoic band. This may be surrounded internally with echogenic mucosa, or externally with anechoic muscle layer.

The radiological, ultrasonographical and computed tomography findings in our case correlated with those seen in GD, hence a diagnosis of GD was made. It was revealed that a gauze plug which had been forgotten during the previous abdominal operation simulated GD.

CONCLUSION

Although a rare entity, GD can be seen in the adult age as well. Since radiological, ultrasonographical and CT findings in GD are similar to those seen in this case of gauze forgotten in the abdomen during a previous operation, it will be useful to consider this possibility in postoperative patients suspected of having a GD. Tc-99 pertechnetate scintigraphy may be of further help in such patients to differentiate the two conditions.

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