CASE REPORT
PERFORATED DUODENAL ULCER ASSOCIATED WITH SITUS INVERSUS AND DEXTROCARDIA

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A 32 years old gentleman, presented in emergency department, with complaints of sudden onset of severe upper abdominal pain, associated with nausea and vomiting. He was a known case of acid peptic disease. His abdominal examination showed signs of peritonitis. X-ray chest showed pneumoperitoneum, with dextrocardia. Ultrasound showed situs inversus. Exploration confirmed the diagnosis of perforated ulcer and situs inversus. Grahm’s patch repair of perforation was done. His postoperative recovery was smooth.

Keywords: Situs inversus, perorated ulcer, dextrocardia

INTRODUCTION
Dextrocardia with situs inversus is a relatively uncommon condition. The first case of perforated duodenal ulcer with dextrocardia and situs inversus was reported in 1986.1 This can be classified as total and partial. Total situs inversus is characterized by heart in the right side of the chest, liver and gall bladder in the left side. Exact aetiology of this condition is unknown. This is autosomal recessive condition caused by mutation in the gene encoding axonemal heavy dynein 11.2 It may also be attributed to clockwise rotation of viscera during early embryonic life.3

We are reporting the first case of perforated duodenal ulcer with situs inversus totalis, presenting as peritonitis in a Dubai Hospital.

CASE REPORT
A 32 years gentleman, presented in emergency department, with complaints of sudden onset of severe upper abdominal pain, associated with nausea and vomiting of 8 hours duration. He was a known case of acid peptic disease. He had history of alcohol intake and smoking. His general and physical examination showed: a pulse rate of 110/minute and blood pressure of 100/80 mm Hg. He was febrile with 38°C temperature and dehydrated. His abdominal examination revealed board like rigidity and guarding more pronounced in the upper abdomen.

Laboratory investigations showed haemoglobin of 10.9 gm/dl, Leucocytosis of 16x10^3 IU. X-ray chest showed dextrocardia with pneumoperitoneum, and air fluid level in the stomach on the right side. (Figure-1) Ultrasound of the abdomen was done, which showed situs inversus, and free fluid in the peritoneal cavity. (Figure-2) A Clinical diagnosis of perforated peptic ulcer with dextrocardia and situs inversus was made. After resuscitation with intravenous fluids, antibiotics, pantoprazole and analgesics, a nasogastric tube and a Foley’s catheter were inserted. The patient was explained about the disease, and after taking an informed consent, exploratory laparotomy was performed. Diagnosis of perforated duodenal ulcer with situs inversus was confirmed, showing liver in the left side, and spleen in the right side. Ascending colon and appendix were in the left iliac fossa, and sigmoid colon was in the right side. Graham’s patch repair of the perforated ulcer was done with polydioxanone (PDS) suture. A thorough peritoneal lavage was performed and abdomen was closed. His postoperative recovery was uneventful. He was started on oral diet and discharged on 5th postoperative day. He was given eradication therapy for H pylori, on the advice of the gastroenterologist.

Figure-1: X ray chest, showing pneumoperitoneum and dextrocardia
DISCUSSION

Situs inversus with dextrocardia is a relatively uncommon anomaly. Its incidence ranges from 1 in 4000 to 1 in 20,000 population. This is an autosomal recessive condition caused by mutation in the genes. It is suggested that immobility of nodal cilia inhibits the flow of extra embryonic fluid during the embryonic period, which leads to the development of situs inversus.

Now this has been suggested that mutations affecting CCDC11 and DNAH11, with mutation in TGF-B family gene have significant role in the process of situs inversus.

This condition usually remains undiagnosed until the patient presents with some respiratory, cardiac or abdominal complaints. Some cases of situs inversus associated with chest infection, lung abscess, perforated peptic ulcer, acute appendicitis and cholecystitis, have been reported in the literature. Reported respiratory tract infections and lung abscess associated with situs inversus totalis was reported in another case report.

Preoperative recognition of this condition is important for better explanation of the disease to the patient and choice of surgical procedure. During the procedure the surgeon has to be very careful, as he may not encounter the usual anatomy of the abdominal organs, and the surgeon should also look for the associated anomalies.

CONCLUSIONS

Situs inversus totalis is a rare condition. The surgeon and the radiologist should be familiar with the anomalies associated with this condition. Preoperative diagnosis is important for planning surgical procedure.

REFERENCES


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