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Jacobs Journal of Gastroenterology and Hepatology

Case Report

Dilated Stomach in Outlet Obstruction as a Cause of Small Bowel Volvulus: First Case Report

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Received: 07-08-2015

Accepted: 10-23-2015

Published: 12-08-2015

Abstract

54 years old male with chronic duodenal ulcer with gastric outlet obstruction had presented with small bowel volvulus, very rare life threatening surgical emergency is reported for the first time.

Keywords: Gastric Outlet Obstruction; Small Bowel Volvulus

Introduction

Small Bowel Volvulus (SBV) is rarely seen among adults [1]. It becomes a surgical emergency [2]. There is no single specific diagnostic clinical sign or abnormality in laboratory or radiological findings.

No role of conservative management in suspected case of SBV and early laparotomy should be done to avoid massive bowel resection due to gangrene [1,3].

Benign gastric outlet obstruction (GOO) causing SBV is not yet reported so far.

Case

54 years male, 172 cms tall, was a diagnosed case of chronic duodenal ulcer with GOO. An elective surgery was being planned. Suddenly he started having central abdominal pain and abdominal distension with small and frequent vomiting, unlike the vomiting of GOO. Clinically there was tachycardia without raised temperature, respiration rate was 36/min and BP was 100/60 mm Hg. The abdomen was distended; there was tenderness all around but no rebound tenderness. His haematological and biochemical parameters were within normal limit two days back. A naso-gastric tube was passed to decompress the stomach but the distension persisted. So an emergent CT scan was done (Image1 and 2) which demonstrated NG tube tip in the pelvis with lot of food residue. The whole of small bowel was fluid filled and dilated. A fast forward laparotomy was done. At laparotomy, stomach was not visible; the whole of the small bowel and up to right colon was dilated and was dusky. In this panicky situation, the stomach was identified by the presence of Ryle's tube just below the gastro-esophageal junction, was caught and pulled up anteriorly towards the wound, which required substantial force after which the stomach shape was made out and the small bowel became pink in minutes with 100% oxygen.

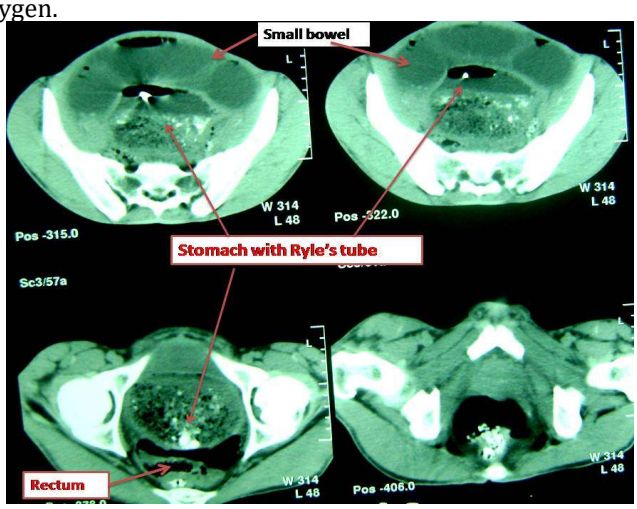

Figure 1. CT scan showing four sections showing the stomach in pelvis between the rectum and dilated small bowel

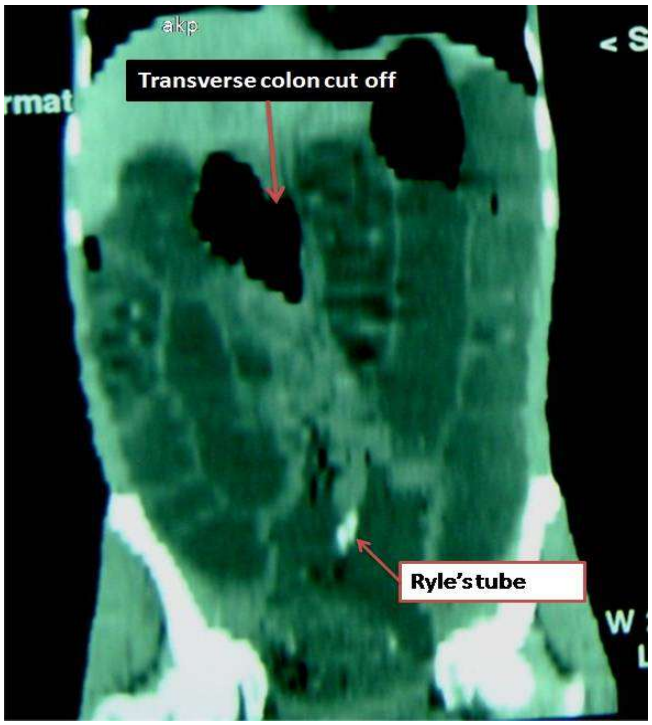

Figure 2. Re-formatted CT picture showing Ryle's tube in pelvis and dilated transverse with cut off(due to stomach

The whole of small bowel was scanned and was found to be fully vascularized. There was no adhesion what so ever. The first part of duodenum was like a half centimeter diameter atretic cord. A posterior, retro-colic gastro-jejunostomy was done and abdomen was closed without a vagotomy in this emergency to shorten the operation time. He had an uneventful recovery. He was given an anti HP therapy and put on Omeprazole SOS during the 56 months follow, he remained asymptomatic.

Discussion

Small bowel volvulus is a rare but it is a life-threatening surgical emergency. The aetiology may be primary, as is often seen in Africa and Asia [4,5,]The main aim is to achieve an early diagnosis to prevent a necrotic small bowel. CT scan is the imaging test with the best diagnostic accuracy [6]. In this case an urgent CT scan raised the doubt by the presence of dilated fluid filled bowel. Bowel dilatation in severe GOO is unlikely and hence it became quite obvious. In this case earliest laparotomy was done in a span of one hour. The recommended treatment is the same to avoid bowel infarction [3]. This also avoids bowel resection, anastomosis and its inherent complication and leading to short bowel syndrome. Worse outcome is seen in presence of associated co-morbidity [5] GOO causing primary SBV is not reported before and this is first of this kind. It is very difficult to explained. The only way to explained is that, Ryle's tube used to empty the stomach, actually evacuates the fluids leaving behind the solids in the dilated empty stomach, which goes down to the dependent part and on standing it goes to the pelvis and possible get impacted, which is seen on the CT scan (Fig-1 and 2). In this case the thin cord like first part of duodenum which was foldable must have helped in the positioning the stomach in the tubular shape for a longer time leading to compressing the 3rd part of duodenum and transverse colon at the crossing of the superior mesenteric vessels and thus the event. We operated at the stage of venous compression and hence the fluid filled small bowel, which reverted back after pulling the stomach out. Gastro-jejunostomy was essential for bypass, for reduction of the stomach size and thus prevents such recurrences and improvement of nutritional state.

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