INTRODUCTION
Jejunal diverticula are a rare presentation with an incidence of 1 - 2% in general population. They usually present in the 6th decade. Such diverticula can be asymptomatic, however, whenever a patient presents with malnutrition, anaemia and abdominal complaints diverticulosis can be one of the differential diagnosis. Symptomatic jejunal diverticulosis patients presenting with acute abdomen usually have to undergo laparotomy or laparoscopy followed by excision. There are some reports of successful conservative management. However, some suggest surgery as safe and effective treatment for symptomatic disease. Complicated diverticular disease can lead to significant morbidity and mortality.

This report describes jejunal diverticulosis presenting as acute abdomen pain in an adult male.

CASE REPORT
A 33-year man presented in emergency with history of abdominal pain, vomiting, constipation and fever for 2 days. There was a previous history of repeated presentations to medical emergency with abdominal pain which were treated as acid peptic disease and got relieved with proton pump inhibitors and analgesics. This time, the pain was only partially relieved with analgesics with resurge as the effect of analgesics weaned off. Hence the surgical team was consulted.

On examination, the abdomen was tender in epigastrium and umbilical region. Bowel sounds were audible and the patient passed flatus during his stay in hospital. Pulse was 90/minute. In the next 6 hours, the patient's pulse rose to 100/minute. The abdominal tenderness increased. Abdominal X-ray showed some distended bowel loops. Repeated abdominal X-ray showed multiple air fluid levels but there was no air under diaphragm on chest X-ray. His leucocyte count was 17000, and haemoglobin was 12.4 g/dl. A nasogastric tube was put in and patient was made nil per oral. An exploratory laparotomy was carried out which showed multiple jejunal diverticula at its mesenteric border in one and a half feet of jejunum almost one feet from the duodenojejunal junction (Figure 1 and 2). The most proximal diverticulae had a pinpoint 0.5 x 0.5 cm rounded perforation at its apex. However, there was no gross spillage or peritonitis. The affected segment of the jejunum was resected and primary single layer extramucosal anastomosis was done.

The patient had an uneventful recovery, was allowed orally on the fifth postoperative day and was discharged on the seventh postoperative day. He was absolutely fine on one month follow-up.

DISCUSSION
Jejunal diverticulosis was first described by Sommerring in 1794 and then by Sir Astley Cooper in 1807. Diverticular disease of jejunum is a rare disease and little clinical significance is assigned to it. These are false diverticula comprising only of mucosa and submucosa without any muscularis. These are most common in jejunum being 80%, 15% in ileum and 5% in both. Such diverticulae are thought to be formed due to dyskinesias, abnormalities in peristalsis and structural wall abnormalities. Hence these are formed on the
mesenteric border where the vessels penetrate the bowel wall.

Diverticular disease of jejunum presents usually in the elderly; mostly in the 6th decade. It can present as an asymptomatic disease, with malabsorption and anaemia or as an emergent condition. When asymptomatic, it is usually incidentally picked up on investigations and no treatment is recommended for it. When a patient presents with malabsorption, anaemia and abdominal complaints then radiological studies such as barium followthrough, CT enteroclysis or capsule endoscopy help in diagnosis. This patient presented with perforation hence barium studies could not be done and CT scan was not available in emergency. Chest and abdominal X-rays may not show signs of free air even with perforated diverticulum as in this case. Such diverticulosis may need treatment if symptoms are refractory to conservative management. Diverticulosis may present in emergency with gastrointestinal bleeding, intestinal obstruction, abscess or perforation. Such cases usually require a laparoscopy or laparotomy and resection of the involved segment. However, the new recommendations are that if correctly diagnosed then asymptomatic diverticular disease can be managed conservatively. Milan et al. suggest that laparoscopy should be used primarily for diagnosis and treatment. If there is a contained peritonitis then lavage and drainage would suffice with continuing conservative treatment. If there is generalized peritonitis then perforated area of gut can be brought out as stoma along with resection of affected segment from a small incision with lavage and drainage. In this way, resection of large segments of bowel can be avoided in cases of multiple diverticula. There was no significant difference in the morbidity and mortality of patients who underwent surgery and conservative treatment except for generalized peritonitis. The patients presenting with gastrointestinal bleeding can also benefit from laparoscopy for diagnosis and treatment with conversion to open surgery only if bleeding is massive or uncontrolled.

This patient presented with a contained perforation and underwent resection and primary anastomosis. It could have been treated with conservative approach if there was availability of laparoscope in emergency. The other unusual point is that this patient was only 33 years of age whereas the mean age of presentation with midgut diverticulosis is the 6th decade. Hence, diverticulosis should be kept in mind as a differential diagnosis in patients presenting with abdominal symptoms even at a younger age and a high index of suspicion is required for patients with related complaints. There is a new approach towards conservative treatment with surgery and bowel resection recommended only for generalized peritonitis or massive bleeding. An awareness about early diagnosis and treatment of jejunal diverticulosis is needed to decrease the morbidity and mortality related to it.

REFERENCES