



## Isolated Jejunal Transection at Two Place in Blunt Trauma Abdomen – A Rare Case

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### Authors' contributions

*This work was carried out in collaboration among all authors. All Authors designed the study and wrote the protocol. Author DKB collected all data and wrote the first draft of the manuscript. All Authors did the literature search and help in writing of the manuscript. All authors read and approved the final manuscript.*

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Case Study

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### ABSTRACT

Blunt trauma abdomen leads to varieties of injury to the intraperitoneal organ. Isolated small bowel injury is rare entity in blunt trauma abdomen. Complete transection of jejunum at two places is also a rare presentation in blunt trauma abdomen. Most of the reported cases of small bowel injury were due to road traffic accident. We report a case of complete transection of jejunum at two places in blunt trauma abdomen without any injury to other organ due to fall off rock slab over abdomen. As per our knowledge, there was no reported case of isolated complete transection of jejunum at two places in blunt trauma abdomen previously.

*Keywords: Blunt trauma abdomen; jejunum; jejunal perforation; jejunal transaction; rare case.*

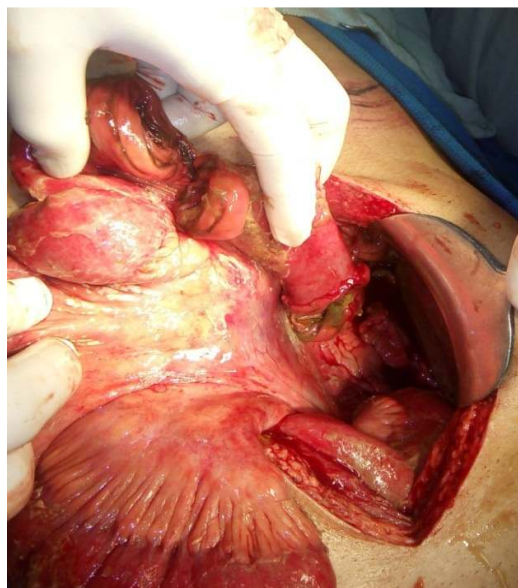
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## 1. INTRODUCTION

Small bowel perforation in blunt trauma abdomen is very uncommon entity. In blunt trauma abdomen mostly involved organ are spleen and liver, the solid organ [1]. Diagnosis of small bowel injury is difficult because these patients have less clinical symptoms at the time of injury, mostly pain abdomen. Scenario of small bowel injury varies from small perforation to complete transection of small bowel. We report a case of complete transection of jejunum at two places which is also uncommon. This may be the first case reporting of isolated transection of jejunum at two places in blunt trauma abdomen.

## 2. CASE REPORT

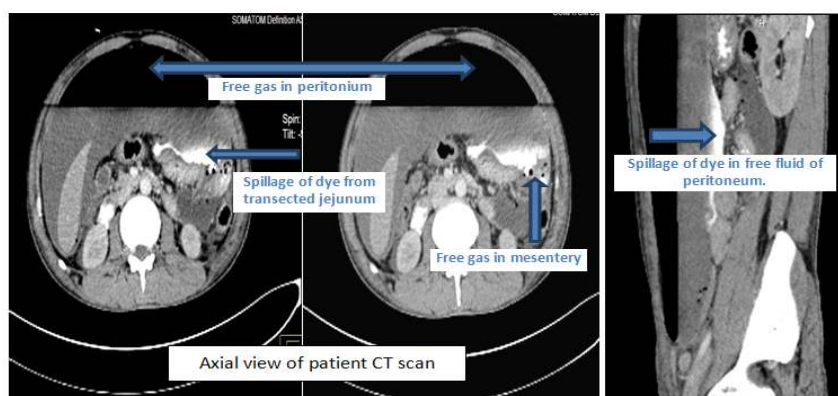
A 30 years old man came in casualty with complaint of pain abdomen after fall off slab of rock over abdomen at working place. He was laborer. His flat abdomen x-ray showed gas under right dome of diaphragm. He was admitted in ward. At the time of admission patients pulse was 110 and BP was 112/76mm of Hg. On clinical examination there was abrasion over left upper abdomen and tenderness over upper abdomen. Computed tomography abdomen-pelvis of patient done urgently, which showed pneumoperitoneum, free gas in mesentery, minimal hemoperitoneum and solid viscera were normal. CT showed spillage of dye in peritoneum from proximal small gut most likely from jejunum. This spillage indicates jejunal perforation. He was operated in emergency operation theatre on same day of accident. There was minimal hemoperitoneum and complete transection of jejunum at two places and minimal contamination with jejunal content. There was no mesenteric injury. There were no gangrenous changes in intestine, even at transected ends of jejunum. Proximal transection was half foot distal to the duodeno-jejunal junction and second one at 10 centimeter distal to the proximal transection. The small segment of jejunum between two transected ends was resected and end to end anastomosis was done after refreshing the margin of jejunal both end. After peritoneal wash abdominal drain was placed and wound site closed. On post-operative day 5, oral liquid was allowed to the patient and semi-solid after day 7. Patient was discharged on post-operative day 11 without any complication.



**Fig. 1. Showing complete transection of jejunum at two places**

## 3. DISCUSSION

First case of intestinal perforation due to blunt trauma abdomen was reported by Annan in 1837 [2]. Small bowel perforation due to blunt trauma occurs as a result of road traffic accidents and fall from heights, and are often associated with multiple injuries [3]. Dinesh et al. reported in 2015 a rare case of gastric rupture in blunt trauma abdomen [4]. We report this case of jejunal transection at two places without any associated injury to other abdominal organs. Injury to the small bowel in blunt trauma abdomen may be due to compression and deceleration forces [5]. Transected injury of small bowel in blunt trauma is due to crushing of bowel between vertebral column and the anterior abdominal wall [6]. Isolated bowel perforation is rare presentation after blunt trauma abdomen. Mechanism of isolated bowel perforation is believed to be that of a blowout caused by a localized increase in the pressure within the bowel lumen [7]. Early diagnosis of bowel perforation in blunt trauma abdomen is very difficult because sign and symptoms of peritonitis due to jejunal contents appear late [8]. That's why mostly these patients missed proper diagnosis at primary clinical examination and required radiological evaluation to rule out bowel injury. Diagnostic techniques used in blunt trauma abdomen include x-ray, ultrasonography, CT scan, Diagnostic peritoneal lavage etc.



**Fig. 2. Various view of CT scan of patient**

#### 4. CONCLUSION

Isolated bowel injury is uncommon entity. It is difficult to diagnose clinically, delay in diagnosis increase the morbidity and mortality. Early diagnosis and end to end anastomosis of both ends of bowel after refreshing the margin will leads to good outcome.

#### CONSENT

All authors declare that written informed consent was obtained from the patient for publication of this paper and accompanying images.

#### ETHICAL APPROVAL

It is not applicable.

#### COMPETING INTERESTS

Authors have declared that no competing interests exist.

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