A RARE CASE OF DELAYED PRESENTATION OF CAECAL AND ASCENDING COLON PERFORATION FOLLOWING BLUNT TRAUMA ABDOMEN

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PRESENTATION OF CASE

- A twenty-year-old male patient presented in surgical emergency with history of blunt trauma to abdomen two weeks ago. The patient's only complaint was a vague abdominal pain after trauma, and he did not seek medical attention immediately.
- After a week, he had severe abdominal pain, fever and loss of appetite and was treated in a local hospital. Later he was referred to our hospital.
- He presented in our surgical emergency two weeks after the injury. On presentation patient was in shock with BP-80/60 mmHg, PR-120/min., temp-101. Abdomen was distended, tense and tender. On per rectal examination blood stained stools were present.
- In x-rays, no air under diaphragm was seen and, in the ultrasound, only mild fluid collection in the pelvis was seen.

CLINICAL DIAGNOSIS

Acute Abdomen Caused by Blunt Trauma

DIFFERENTIAL DIAGNOSIS

- Hollow Viscus Injury- Gastric, Small Gut or Large Gut
- Liver or Splenic Injury
- Renal Injury
- Mesenteric Ischaemia

PATHOLOGICAL DISCUSSION

- Large bowel injuries are usually diagnosed intra-operatively in blunt trauma abdomen. The rate of complications associated with colon injury is significantly higher if duration is longer than 24 hours after the injury.¹
- Transverse colon and sigmoid colon are more vulnerable due to their mobility.
- Ascending colon perforation is quite rare in blunt trauma as it is fixed to retroperitoneum.²

- Unprepared bowel, sepsis and electrolyte imbalance are associated with poor prognosis.
- In 2001 an American association for the surgery of trauma a multi-institutional study was performed and identified severe faecal contamination, single antibiotic prophylaxis and transfer of more than 4 units of PRBCS as independent risk factors.³
- The massive deceleration force or crush injury associated with the blunt mechanism makes these colon wounds more susceptible to ischaemia from mesenteric compromise.⁴

DISCUSSION OF MANAGEMENT

- He was immediately taken up for exploratory laparotomy. On opening the peritoneal cavity about 2L of haemorrhagic fluid was present. After adequate lavage with normal saline, abdomen was systemically examined which revealed a perforation of caecum and ascending colon.
- There was a full thickness perforation caecal and colonic of wall. Rest of the gut was normal, and no solid organ injury was present.
- On table decision was made to perform an ileotransverse anastomosis instead of colostomy considering the age of the patient and absence of faecal matter in peritoneal cavity.
- Post operatively patient was given adequate antibiotic coverage. Recovery was rapid with bowel sounds appearing on the second day and patient being able to start liquid feeds from third day. He was discharged on the 10th postoperative day under satisfactory conditions.

The histopathological examination later revealed non-specific inflammatory changes.

Despite evidence-based reports leading to more defined risk factors, concerns that left sided colon injuries treated with resection anastomosis carries an increased risk of complications remain unproven.⁵

Multiple evidence-based studies during the last several decades allowed for more aggressive management with most injuries undergoing primary repair and anastomosis. American association for the surgery of trauma have given guidelines to help determine the severity and aid the decision-making process.⁶

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AAST Grade	Meaning	Expected Treatment
1 a	Mesenteric Haematoma or Colonic Wall Haematoma	Observation
1 b	Simple Partial Thickness Laceration or Small Full Thickness Laceration (<50% of Circumference)	Simple Suturing and Primary Repair
2	Above with Associated Peritoneal Contamination	Simple Suturing and Primary Repair
3	Large Lacerations Involving More Than 50% Of Bowel Circumference	Surgeon Discretion and Experience
4	Transection of Bowel Wall	Surgeon Discretion and Experience
5 a	Transection with Segmental Tissue Loss	Surgeon Discretion and Experience
5 b	Devascularised Tissue	Surgeon Discretion and Experience
Table 1		

FINAL DIAGNOSIS

Delayed Presentation of Perforation Peritonitis (Caecum and Ascending Colon) After A Blunt Trauma

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