Post-Traumatic Long Segment Small Bowel Stricture
A Diagnostic Dilemma

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Surgical Science, 5, 508-511.
Introduction

- Delayed post-traumatic small bowel stricture is rare
- Caused by chronic ischemia, fibrosis and stricture-formation
- Often misdiagnosed with more common causes of small bowel stricture


Case One

- 14 year old boy
- Blunt trauma to the abdomen

At presentation two weeks later -
  - Intermittent colicky abdominal pain
  - Abdominal examination: no significant findings
Case One

• Ultrasound abdomen: heterogeneous localized collection superior to the bladder.
  ▪ Subsequent scans on follow-up – no progression or regression
• CECT abdomen:
  ▪ focal, long segment, small bowel thickening from the level of the umbilicus to the dome of the urinary bladder.
  ▪ Bowel loops appeared hypodense with mural stratification and inflamed adjacent mesentry with multiple enhancing nodes.
Case One

- With a suspicion of inflammatory bowel disease – exploratory laparotomy performed
- Intra-operative findings:
  - Segment (15-18cms) of thickened and inflamed ileum along with thickened mesentery
  - Loop was adherent to the dome of urinary bladder and sigmoid colon
  - Inflamed appendix
  - Resection of loop along with dome of bladder and end to end anastomosis with bladder repair
Figure 1. (a) CECT abdomen showing thickened bowel wall (A) with proximal dilated bowel loop (B);

Figure 1. (b) Resected ileum with dome of bladder (C), thickened appendix (D).
Case Two

- 45 year old male
- Intermittent colicky lower abdominal pain – 3 months
  - Non-bilious vomiting 1-2 hours after oral intake for 2 weeks
- 5 months prior
  - Fall from height
  - USG abdomen and CECT abdomen – normal
Case Two

- Repeat CECT at presentation
  - Long segment of small bowel stricture with inflamed mesentery.
- Exploratory Laparotomy
  - 15cm strictured segment of small bowel with inflamed mesentery
  - Proximal bowel – dilated and distal bowel – collapsed
  - Resection and end to end anastomosis performed
Chronic non-specific inflammatory changes (Hematoxin and eosin stained slide with magnification of $40\times$).

Resected ileum
Discussion

- Blunt abdominal trauma - <1% admissions
- Proximal jejunum and terminal ileum
- Sequence of events

Mesenteric ischemia
  ↓
Hematoma
  ↓
Fibrosis
  ↓
Stenosis

Discussion

- Observations to aid in diagnosis
  - History of blunt trauma
  - No apparent illness prior
  - Onset of symptoms after trauma
  - Confirmation by imaging
  - No specific histo-pathological features

Discussion

- CECT sings
  - Bowel discontinuity
  - Bowel wall thickening and enhancement
  - Extra-luminal oral contrast/air
  - Intra-luminal air
  - Mesenteric infiltration

Conclusion

- Clinical and radiological findings mimic inflammatory bowel disease
- Exploratory laparotomy – choice for diagnosis and treatment
Thank you