

Spontaneous Bowel Perforation: Rare Primary Finding of Abuse in a Pediatric Patient

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Background

- Abdominal visceral perforation has been reported in all forms of blunt abdominal trauma in up to 8% of children; however, less than 0.5% of abused children have major abdominal trauma.
- Pediatric victims of blunt assault with hollow viscous injury most commonly perforate within 100 cm of the ligament of Treitz.
- Mortality approaches 30-50% and reduction of risk relies on early diagnosis.

Methods

We present a pediatric patient who underwent exploratory laparotomy for pneumoperitoneum and suspected small bowel obstruction on imaging who was discovered to have bowel perforation as well as occult splenic lesions and chondral masses of multiple ribs. The determination was made after multidisciplinary investigation that these findings were likely resultant of abuse. We discuss presentation and management of this uncommon presentation of physical mistreatment in a pediatric patient.

Case Presentation

- A 2-year-old male with no surgical history presented with a one-day history of emesis and abdominal pain. Patient with leukocytosis and CT imaging showing left rib costochondral masses, dilated bowel loops concerning for small bowel obstruction, and pneumoperitoneum. On transfer from outside facility, patient hypotensive requiring vasopressors and taken emergently for exploration.
- Feculent peritonitis noted and 15cm segment of mid-jejunum with frank perforation resected. Innumerable punctate splenic lesions seen. Patient returned for washout, anastomosis and closure as well as rib mass biopsy after further resuscitation.
- Hospital course complicated by ileus and post-operative intra-abdominal abscess requiring percutaneous drain. Pathology for rib masses consistent with benign endochondral ossification, concerning for callous formation at possible prior fracture sites.
- Discussions with family and in setting of operative findings and pathology concerning for abuse as likely underlying etiology. Forensic medicine and social work assisted with patient placed in protective custody at time of discharge.

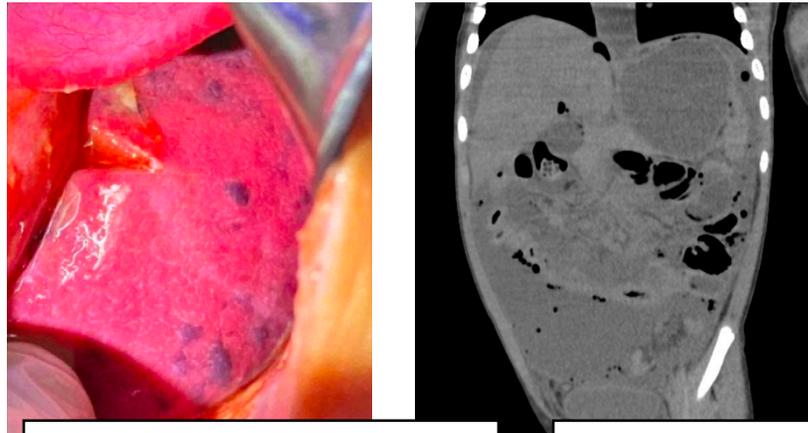


Fig 1: Splenic lesions noted intra-operatively

Fig 2: CT Abd/Pelvis W/ at time of presentation, pneumoperitoneum noted

Conclusion

- This case represents a unique presentation of abuse in a pediatric patient. In this case, the patient had minimal delay in care and no history of trauma.
- The rib lesions had been identified prior but had not been evaluated as a possible pathologic finding. Initial imaging was concerning for obstruction and perforation with pneumoperitoneum, though in absence of surgical history. CT occult splenic lesions and small capsular tear were evaluated during post-operative hematologic work-up.
- Ultimately, all findings were attributed to a remote history of abuse¹.
- This case illustrates that abuse should be considered within the differential of intestinal perforation in young pediatric patients regardless of absence of abuse history or known trauma.

References

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