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Case Report:
Pediatric Blunt Aortic Injury

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Disclosures

- No financial disclosures

Background

- Blunt abdominal aortic injury (BAAI) in children is rare
- Limited literature and no established treatment guidelines
- Mortality is ~35%
- Motor vehicle collisions (MVCs) being the most common mechanism of injury

Case Description

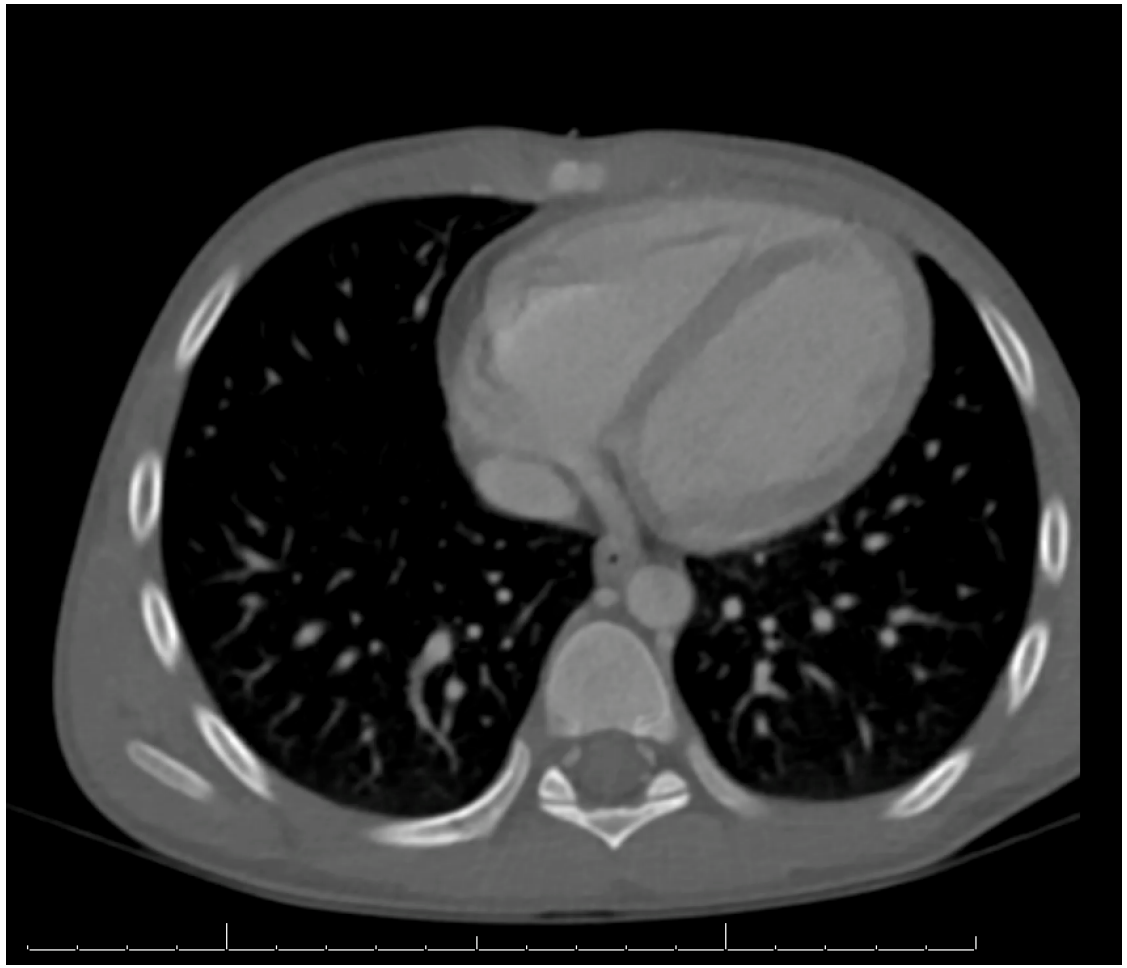
Case

- Restrained 7-year-old male with blunt abdominal trauma after MVC

Initial trauma assessment:

- Patient was alert and HDS
- Physical exam
  - Generalized peritonitis
  - Seat belt sign
  - Lower Extremities: Weakly palpable pedal pulses with normal motor and sensory function

Case Description



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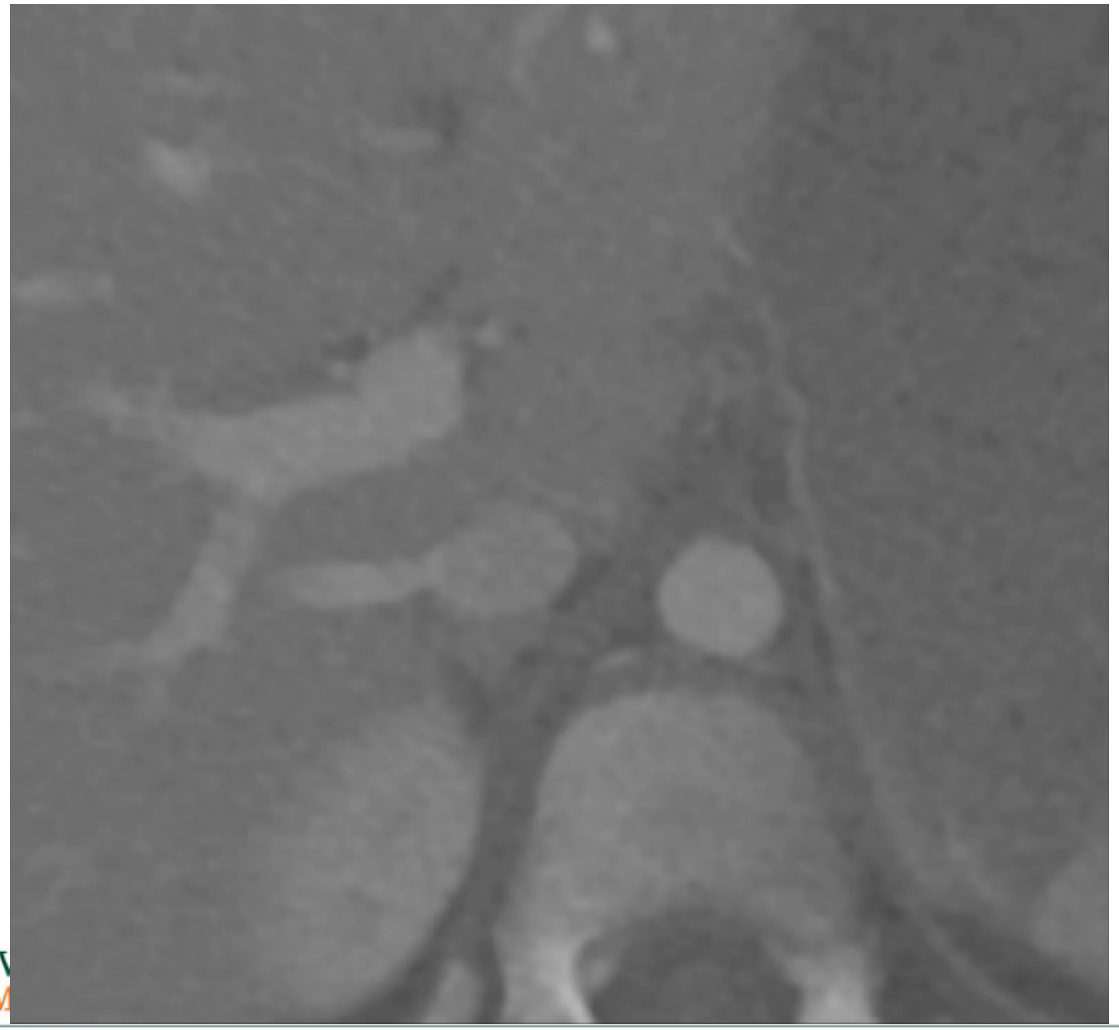
Case Description



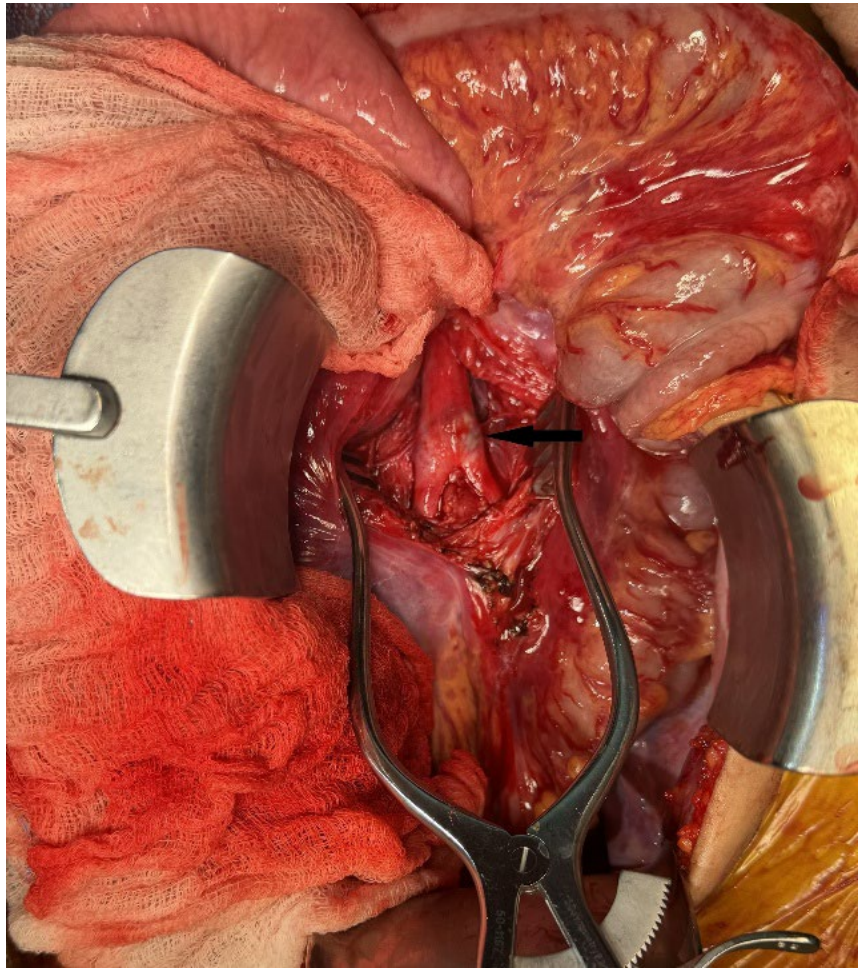
Operative Technique

Pediatric surgery:

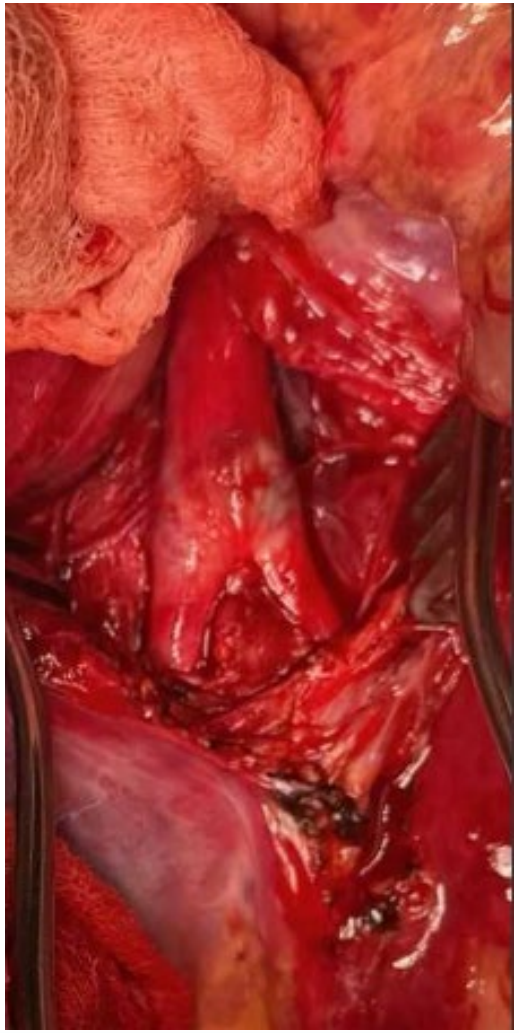
- Small and large bowel resection with staple anastomoses
- No gross spillage or contamination

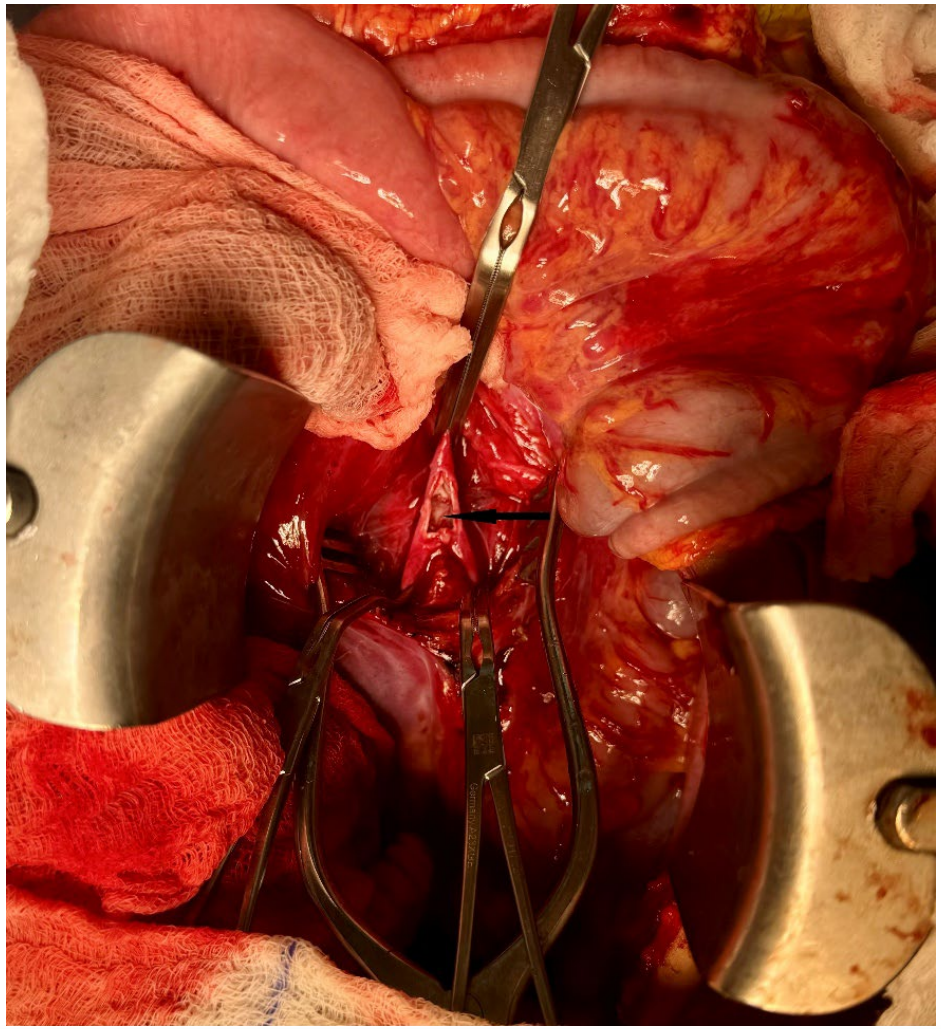
Vascular surgery:

- Zone I retroperitoneal hematoma exploration
- Infrarenal aortic and bilateral common iliac thromboembolectomy
- Aortic repair with rifampin-soaked bovine pericardial patch



Operative Technique





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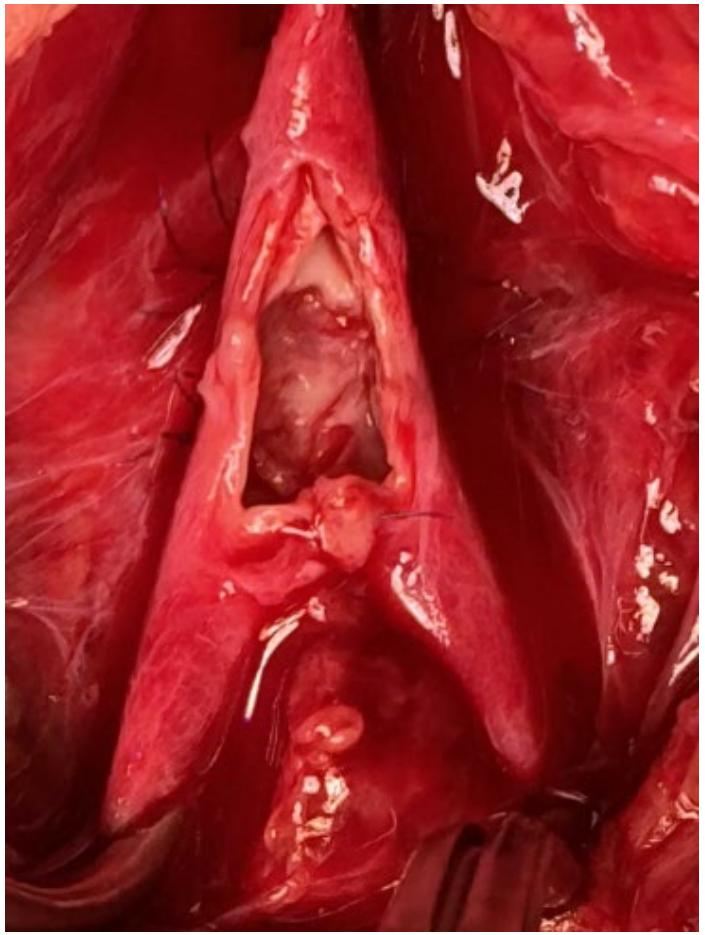
Operative Technique



Post-op Course

- Postoperatively, the patient had bilateral multiphasic pedal signals and good capillary refill
- Transferred to Pediatric ICU
  - Extubated
  - Remained hemodynamically stable without pressors
- Started on weight-based antiplatelets for 3 months
- ICU stay until POD 3
- Discharged on POD 6 without complications
- 3-month follow-up: Aortic ultrasound showed normal flow with no occlusion or stenosis

Discussion

- Nonoperative vs. operative management
- Open surgical repair has historically been the primary treatment for pediatric abdominal aortic trauma
  - Endovascular repair has emerged more recently
- Take into consideration growth in size of vasculature with aging of patient

Conclusion

- We performed open infrarenal aortic repair using a rifampin-soaked bovine patch which offered the patient an effective and durable solution
- Long-term patency and outcomes after pediatric open aortic repair remain unclear

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Thank You