

Pediatric Vascular Surgery—What Is The Role of Endovascular Interventions?



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No disclosures

Introduction

- Pediatric patients with numerous vascular pathologies are a significantly underrepresented population.
- Very few, if any comprehensive vascular surgery programs exist to provide care to these children, including within dedicated pediatric hospitals.
- The role of open vascular surgery has been defined in certain pathologies.
- Less is known about the utility and safety of endovascular interventions.



Introduction

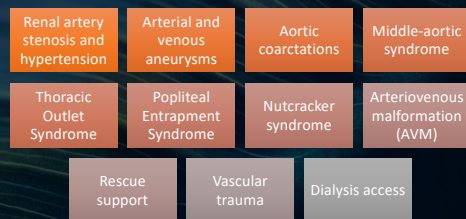
- In 2022 we established one of the first comprehensive pediatric vascular surgery programs to date with a full-time call schedule and dedicated clinic and operating room block time



Organization at the Children's Hospital of Philadelphia



What pathologies are involved in pediatric patients?

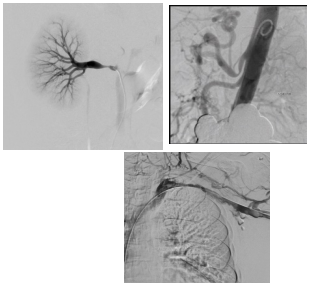


Role of endovascular therapy

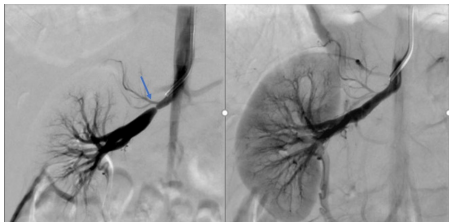
- Diagnosis
- Interventions prior to open aortic/visceral arterial reconstructions
- Primary interventions
- Rescue procedures and secondary interventions
- Blunt aortic injuries

Diagnostic tool

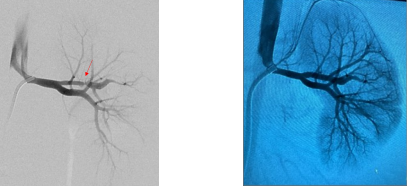
- Renal artery stenosis
- Thoracic outlet syndrome
- Nutcracker syndrome
- MALS
- Traumatic injuries



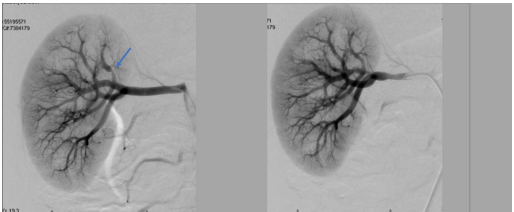
Interventions prior to open renal artery revascularization



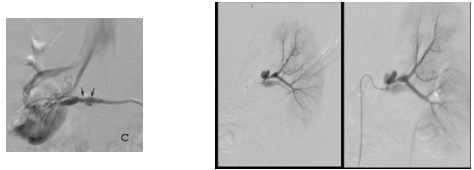
Primary interventions: distal renal artery disease



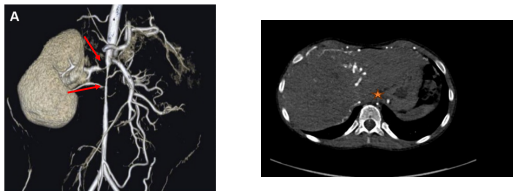
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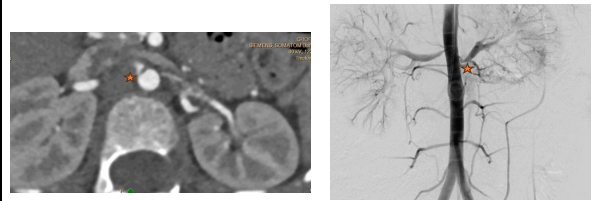
Complications



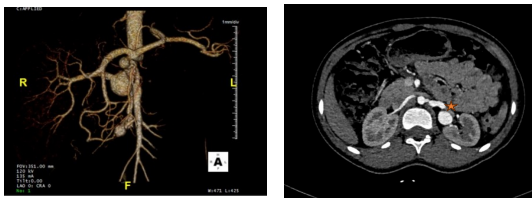
Certain Aortic Pathologies Favor Open Surgical Approaches



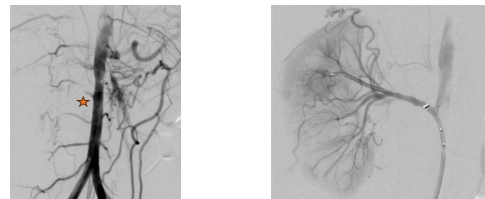
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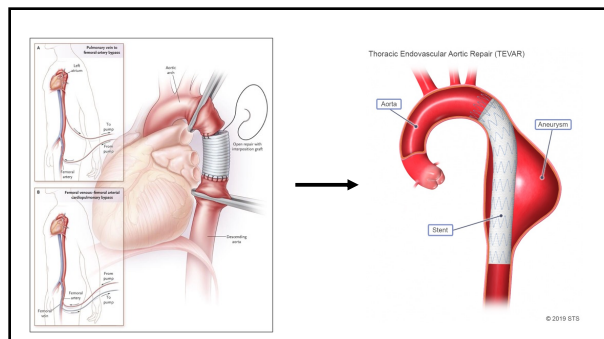
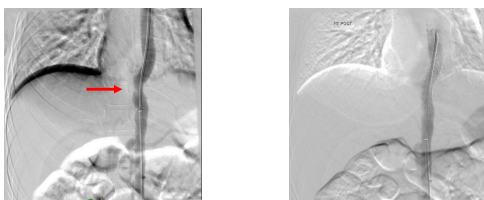
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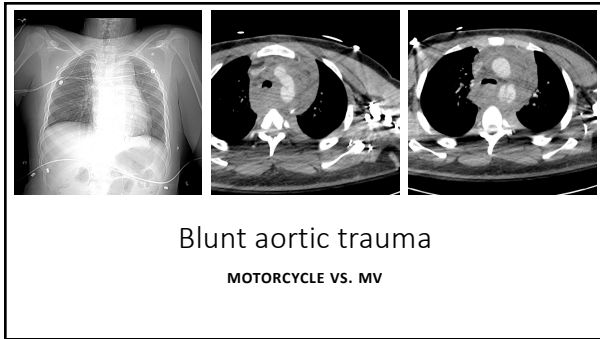


Rescue Procedures and Secondary Interventions




Rescue Procedures and Secondary Interventions






TEVAR in Young Patients

- Aortic diameter
- Aortic arch angulation
- Long term follow up



Blunt Aortic Trauma: Forklift vs. Abdomen

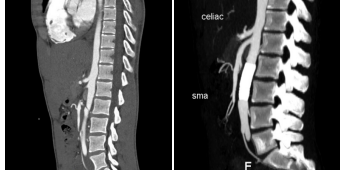


Considerations:

- Accessory renal a. proximal to transection
- Open vs. endovascular approach
 - durability of endo?
 - limitations of endo technology?
 - open operation in an active teenager

Blunt Aortic Trauma

FORKLIFT VS. ABDOMEN



Conclusion

- Vascular surgeons provide a "patient first" approach in managing pediatric vascular pathologies
- Endovascular interventions have a role in diagnosing and treating numerous pathologies
- Most important is acknowledging the limitations and pitfalls of endovascular therapies
- Better define the role of endovascular therapies in children moving forward
- Understanding the role of endovascular interventions is clearly different in pediatric patients given the imperative allowing for durability and the growth of children.

Thank you!

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