CT Angiography in the evaluation of Post-operative shunts and conduits

Prakash M Masand MD
Division Chief, Cardiovascular Imaging
Department of Radiology, Texas Children’s Hospital
Assistant Professor, Baylor College of Medicine
Houston, Texas
Disclosure

- Toshiba Medical Systems Speaker Bureau
- Consultant: Vital Images
- Consultant: Daiichi Sankyo (Venous thromboembolism in pediatric patients charter)

Grants
- Cystic Fibrosis Liver disease Foundation
- NASH-CRN study: Site Principal Investigator
- Pilot grant from Texas Children’s Hospital: Shearwave Elastography for Hepatic Veno-occlusive disease in pediatric patients
Background

• CTA in the evaluation of the post-operative pediatric patient is
  ▪ fast
  ▪ consistent
  ▪ easily understood by surgeons (3D post-processing)

• Targeted questions
Case Discussions

Don’t tell me!
Show me!
Post-operative Indications

Norwood Stage 1: Sano
- Anastomotic narrowing
- Aneurysmal

RV-PA Conduit
- Stenosis
- Thrombus
- Aneurysmal

Vascular stent
- In-stent stenosis
- Jailed vessel

Airway compromise
- Post-arterial switch

Special scenarios
- Baffle
- Artificial heart
- LVAD imaging
Stage 1 Norwood: Sano shunt
Stage 1 Norwood: Sano shunt
RV-PA Conduit
Vascular stent
Vascular stent
Airway Compromise
Special case
Special case
Summary

- CTA is a terrific problem solving tool, geared towards providing quick anatomic definition
- Excellent choice when dealing with metallic hardware
- No brainer for airway evaluation (dynamic information)
- Temporal and spatial resolution
THANK YOU