Liver Doppler, including Liver Transplants

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Faculty Disclosure

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Search Pattern

- **Grey Scale**
  - Liver parenchyma
  - Bile ducts
  - Fluid collections
  - Effusions
  - Spleen
  - Kidneys

- **Doppler**
  - Portal vein
  - Hepatic artery
  - Hepatic veins
  - IVC
  - Splenic vein
  - Varices
Search Pattern

Hepatic artery
Search Pattern

Portal Vein
Cavernous transformation of PV
Search Pattern

Hepatic veins
Hx of Fontan
Search Pattern

IVC
1 year old with ascites
Search Pattern

Splenic Vein
Search Pattern

Varices
Liver Transplant Stats

• 500 – 600 pediatric patients each year
  < 1 year old  30 %  →  70 %
  1 – 5 years old  40%
  6 – 10 years old  10 %
  11 – 18 years  20 %

• Indication for Transplant
  Biliary Atresia  60 %
  Fulminant Hepatic Failure  15%
  Metabolic Disease (urea cycle)  10 %
  Primary Dz (Alagille, Alpha1, cryptogenic)  10 %
  Primary Hepatic Malignancy  5 %
Liver Transplants

• Whole Liver
• Segmental Liver
• Combined Liver /Small Bowel
Whole Liver Tx
Normal WLT
Donor IVC
Segmental Liver Tx
Segmental Liver Tx
Segmental tx hepatic artery
Combined Liver & Small Bowel Transplant
Complications . . .
Rejection

Jequier et al, Radiology 2003; 226:105-112
PV stenosis
Impending PV thrombosis
Arterial Stenosis & Mimics

- Kink
- Spasm
- Post-op edema
- Transducer pressure
HA thrombosis
HA thrombosis -> ductal dilation
AV fistula
Sepsis, pseudoaneurysm grew pseudomonas
Segmental tx rising LFT’s
Questions?