Vena Cava Reconstruction for Renal Cell Carcinoma

Disclosures
• None

Surgical Management
• Control of proximal and distal IVC essential
• Liver mobilization techniques (liver on a stick)
• Thrombus milked back and Hepatic veins are clamped (TEE Very Helpful)
• Division of small / lesser hepatic veins etc
• Excision of IVC may be necessary

Suprahepatic Control
• Detach Medial and Lateral Ligaments

Suprahepatic Control
• Expose Suprahepatic Cava
Suprahepatic Control

• Isolate Hepatic Veins separately, if possible

Combined Approach
Infrarenal Dissection

Control Infrarenal Vena Cava

Clamping Sequence

- Arterial inflow (Pringle)
- Contralateral Renal vein
- Hepatic Veins
- Suprahepatic Cava
- Infrarenal Cava
- Move Clamp To Infrahepatic Cava after Tumor Removed Completely
- Watch Out For Large Posterior Lumbar Veins

Resection of RCC

IVC Incised

Tumor Removed Infra Hepatic Clamp Placed
Removing The Tumor
Evaluated Resection
Completed Reconstruction
Completed Reconstruction
Suture Line
Retrohepatic Repair
What if It Doesn't Come out Easily?
- Balloon Thrombectomy
- Manual Venous Endarterectomy
- Larger Vena Cava Resection with Patch
- Replace Entire Vena Cava With PTFE
- Ligation with Preservation of Drainage From Contralateral Kidney
Vena Cava Replacement

THANK YOU

THE VASCULAR GROUP

Our Recent Experience

- 134 Patients in last 15 years
- One periop death
- 70% required Suprahepatic Control
- 10% required Median Sternotomy
- One pt required early dialysis (IVC Thrombosis/Lysis had pre-op Supra renal filter)
- 3% IVC Ligation
- 15% patch or Bypass (PTFE)

Summary

- Most patients with IVC involvement have significant symptoms
- Surgery may be considered for both curative resection and palliation
- Significant difference in survival between those with renal vein and IVC involvement
- Most patients without metastases will enjoy long term survival
- Those with metastatic disease do poorly
Completed Reconstruction