Central hepatectomy

Tips and tricks

http://www.youtube.com/watch?v=TMHu5MuWJXM
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Clinical case: Primary Neuroendocrine tumor of the liver

A case is presented of a neuroendocrine primary tumor of the liver, located in segment IVb which infiltrates the anterior median branch of the right portal vein and the confluence of the Right hepatic duct. A central resection involving segments IVb and V is presented due to the fact that the patient (73 years old) has a very narrow functional reserve of the liver and is not suitable for a major resection. The resected specimen showed clear margins after resection of segmento IVb and V and has a small patch of the intrahepatic RHD. After surgery, complementary chemotherapy was initiated.

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CT planning of surgical procedure

Arterial reconstrucción with CT scan

In this case hepatic artery Aries from SMA

Preparation of resection of segmento IVB

Preparation of extraGlissonian approach

Parenchimal transection was done with Liga Sure Impact

Anatomy of the involved hepatic ducts

Branches to be prepared included segments IV, V-VIII

Final aspect after resection

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CT planning of surgical procedure
To establish the feasibility of resection and the anatomy of hilar structures.

Vascular reconstruction of hilar structures
In this case showed a RHA arising from SMA, what makes more selective the arterial dissection.

Preoperative planning with CMRI
In hilar tumours a C-MRI is advisable to plan the reconstruction of CBD, RHD or LHD

Volumetric and functional analysis of resections
Volumetric analysis including functional reserve of any given major resection is advisable ( RH+IV / RH+V)
**Tips and Tricks for central resections (II)**

**Preparing the resection**
I usually perform an IO-US to delimitate the vascular and biliary branches surrounding the tumor. To check the anatomy of the Median SupraHepatic Vein need to be done.

**Extrahepatic glissonian approach**
This is my preferred approach for hilar dissection, with vascular control from the main porta hepatis.

**Reconstruction of the biliary tree**
The IO-US helps to make decisions regarding the extent of resection of bile ducts.

**Clarify the anatomic landmarks with selective vascular occlusion**
I usually delimitate the extent of resection dissecting, isolating and clamping the selected branches for each segment.
Ligasure Impact transection
Since 2009 it is our choice for parenchyma transection, no vascular inflow occlusion is needed if CVP is around 0.

Vascular EndoGIA
Usual we cut the major vessels with the endoGIA, what gives more speed to the procedure.

Final aspect of transected IV and V segments
Blood loss is usually around 300 cc and operative time less than 150 min.

Clear anatomic landmarks
Median suprahepatic vein, maintenance of main right portal branch and left hepatic pedicle is needed for succes.