Surgery of the Liver and intraoperative interventional Therapies What is possible today?

Liver resections are performed to manage Benign and Malignant focal lesions in the liver, and the post-operative outcome was improved over time due to improvement of surgical techniques which get benefit from understanding the liver anatomy and segmentation with improvement of hemostasis techniques. Anatomy wise liver is divided to 2 lobes (Right and left) into 8 segments classified by Couinaud based on vascular inflow and outflow. There are many techniques for liver parenchymal transection started with clamp –crush technique and developed to ultrasonic vibration (harmonic shear), Cavitron Ultrasound Surgical Aspirator (CUSA), hydro jet, radiofrequency dissector and recently staplers. There are numerous types of resection could be divided to major (>2 segments) and minor (<2 segments) and could be divided into anatomical (right and left hepatectomy, right anterior and posterior sectionectomy and left lateral sectionectomy), non-anatomical resection and individual segmentectomy. There are many other interventional procedures can be done during surgery for hepatic focal lesions rather than surgery as radiofrequency ablation (RFA), cryoablation or irreversible electroporation (IRE) which usually kept as combined intervention with surgery in deep parenchymal lesions which difficult to be removed without injuring or scarifying a major hepatic structure. Also one of the elegant technique in management of hepatic focal lesions especially Malignant one is adjuvant or pre operative angio-embolization or chemo/ radiotherapy which deprive the lesion from its blood supply and supplying it with chemo or radiotherapy which may decrease the size of lesion and make it easier and accessible to be removed. In addition to that, systemic chemotherapy could have benefit in malignant lesions as it may decrease the size of the lesions and minimize the liver parenchyma needed to be resected to remove the whole lesion, and sometimes it changes non resectable liver lesions to resectable one.

Biography

Praxis Dr. Hani Oweira is a Partner of the Surgical Center Zurich. He was affiliated doctor at the Andreas Clinic Cham.

Hani.Oweira@hirslanden.ch

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