

**EP 023**

## 3D Planning Of Major Hepatectomy, Concerning Variations Of Portal, Arterial And Hepatic Vein Branches And Remnant Liver Volume

**Amarzaya TUMUR-ULZII**, Byambadash BAT-ORSHIKH, Enkhbold CHINBOLD\*

*Surgery Department, Brilliant Hospital, MONGOLIA*

**Background** : Three-dimensional CT has become an essential tool for successful hepatic resection and living donor liver transplantation. Up to now, many efforts have been made to simultaneously visualize hepatic vasculature and remnant liver volume preoperatively. Here, we introduce portal vein, arterial and hepatic vein vasculature anatomy and remnant liver volume calculation, using a standard contrast enhanced multi-detector computed tomography.

**Methods** : 100 patients, who underwent for major hepatectomy at Brilliant Hospital of Mongolia, were included in this study. A 3D-reconstruction of hepatic vasculature was made using data from contrast enhanced MDCT and SYNAPSE VINCENT software. We identified portal vein, hepatic artery, hepatic vein vasculature and calculated resected volume and remnant liver preoperatively from axial 2D image, and then reconstructed the 3D image.

**Results** : The 3D demonstration of the hepatic arterial, portal and venous anatomy and corresponding drainage patterns provide useful guides for decision making for major hepatectomy. Therefore, we accurately calculated resected volume and remnant liver volume.

**Conclusions** : Preoperative evaluation of portal vein, hepatic artery and hepatic vein branches and calculation of future remnant liver volume and graft volume using the 3D imaging technique might contribute to successful major liver resection.

Corresponding Author : **Enkhbold CHINBOLD** (enkhee103@gmail.com)