

## Future Liver remnant: A Challenge In Liver Resection Surgery

Regmee S, Tamang TY, Maharjan DK, Shrestha SK, Thapa PB.

Department of Surgery, Kathmandu Medical College Teaching Hospital  
Sinamangal, Kathmandu

**Correspondence** : Dr. Sujan Regmee, Resident, Department of Surgery, Kathmandu Medical College Teaching Hospital

Email [sujanregmee@hotmail.com](mailto:sujanregmee@hotmail.com)

### ABSTRACT

**Introduction and Objective:** The frontiers of liver resection are expanding. Future Liver Remnant; its volume, function and complication have a predictive value in post resection outcome including post resection liver failure. This study is directed to discuss the issues related to future liver remnant.

**Objective:** To discuss issues related to Future Liver Remnant in patients planned for major liver resection

**Materials and Methods:** Data of patients admitted for liver resection at Kathmandu Medical College Teaching Hospital, Surgical Unit III with varied diagnosis, were collected prospectively over a period of 1 year. In our non transplant center, Future Liver Remnant was managed with varying methods. Of the 12 liver resections, 3 prototype cases with different FLR issues are discussed in this study.

**Results:** The first case had issue related to the volume of the liver remnant for which she underwent a portal vein ligation followed by resection (after adequate volume increase) in the second surgery. The second case was a Hepatocellular Carcinoma with CTP 8 cirrhosis. Despite adequate liver volume, decision for liver resection was delayed due to possible postoperative decompensation. The third patient was a Hilar cholangiocarcinoma with obstructive jaundice. Biliary decompression (PTBD) was performed. However, inadequate fall in bilirubin caused dilemma for liver resection. Despite the dilemma, all 3 cases underwent liver resection with no postoperative liver failure.

**Conclusion:** Issues related to the volume and function of future liver remnant in patient undergoing liver resection should be adequately addressed by various pre operative, intra operative, and post operative measures.

**Key words:** Future liver remnant, volumetry, liver resection.