

## Liver Transplantation Post Gastric Bypass: Surgeon's Perspective

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Obesity is a global epidemic and its prevalence continues to steadily increase despite recognition of the problem. The surge in obesity rates has also witnessed a major increase in non-alcoholic fatty liver disease (NAFLD). Progression to non-alcoholic steatohepatitis (NASH) is currently the most rapidly increasing indication for liver transplantation in the USA [1]. The long term impact of obesity on liver transplant is subjective to recurrence of NASH and obesity associated comorbidities.

Bariatric surgery provides the most efficient and sustained treatment for morbid obesity. The role and timing of bariatric surgery in relation to liver transplant is challenging and continues to evolve. Intraoperative sleeve gastrectomy and gastric banding at the time of liver transplants are being done more frequently with good short term outcomes. Bariatric procedures at a later stage post liver transplant have also been reported. Liver transplantation in patients with history of gastric bypass poses a unique challenge to the transplant surgeon.

Some known complications attributable to gastric bypass include anastomotic leaks, anastomotic stricture, marginal ulcers and failure to thrive. These complications are extremely relevant with regard to patient selection and timing towards liver transplantation. Recent history of remnant gastric/anastomotic ulcers or anastomotic stricture dilatations should be addressed before consideration towards a liver transplant. Malnourished patients post gastric bypass are vulnerable to delayed healing process after liver transplant. Hence, adequate nutritional support peri-operatively is paramount to improving outcomes post liver transplant.

Literature on surgical complications post liver transplantation with history of gastric bypass is scarce. A recent analysis on outcomes of liver transplant recipients with prior bariatric surgery evidenced 30 day re-operative rates as high as 36%, with biliary complications in 55% at 6 months [2]. Altered bilioenteric anatomy in bypass patients hinders non-surgical management of biliary complications after liver transplant. In patients with prior gastric bypass there are dense adhesions between the gastric pouch and left lobe of the liver. Releasing those adhesions during hepatectomy may result in iatrogenic injury to the wall of the stomach or the jejunum or can potentially disrupt their vascular supply causing local ischemia with risk of perforation. Perforation in this immunosuppressed cohort is often masked with subtle changes in hemodynamics and lab parameters. Early imaging to rule out leaks should be considered.

In conclusion, liver transplant recipients with history of gastric bypass should be considered at increased risk for surgical complications compared to the general population. The process of recipient selection should be rigorous with detailed assessment of current GI function, nutritional status and anastomotic integrity. A high level of suspicion for post-transplant anastomotic leaks or bowel perforation in this subset of patients is suggested. Peri-operatively, ulcer prophylaxis should also be considered.

### Bibliography

1. Agopian VG., et al. "Liver transplantation for nonalcoholic steatohepatitis: the new epidemic". *Annals of Surgery* 256.4 (2012): 624-633.

2. Safwan M., *et al.* "Outcome of liver transplantation in patients with prior bariatric surgery". *Liver Transplantation* (2017).

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