



Safety and Efficacy of Bariatric Surgery in Advanced Liver Fibrosis

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Abstract

Background There is limited data on the safety and efficacy of metabolic and bariatric (MBS) surgery in patients with advanced liver fibrosis.

Methods This is a retrospective analysis of data of patients with advanced liver fibrosis undergoing MBS at a tertiary care centre. Weight loss and complications were analysed. Transient elastography and liver biopsy findings 1 year after surgery were compared with baseline.

Results Twenty-two patients had cirrhosis and 16 had stage 3 fibrosis; all were Child Pugh A. Majority (76%) underwent sleeve gastrectomy. Mean excess BMI loss was $65.8 \pm 18.9\%$. There were no leaks or 30-day mortality. One patient with cirrhosis had late mortality due to liver decompensation. Preoperative and postoperative median LSM were 15.5 kPa (interquartile range IQR = 24.4–11.6) and 10.9 kPa (IQR 19.3–7.6), respectively. Preoperative and postoperative median CAP were 352.5 dB/m (IQR = 372–315.5) and 303 dB/m (IQR 331–269.5), respectively. On follow-up biopsy, nine of twelve patients had improvement in fibrosis, while three had no change. Four out of five patients in the cirrhotic cohort had improvement in fibrosis stage and LSM improved in all of them. Five out of seven patients with stage 3 fibrosis had an improvement in fibrosis stage and none progressed to cirrhosis. LSM improved in three of these five patients.

Conclusion MBS has the potential to ameliorate advanced liver fibrosis, including cirrhosis. Transient elastography can be used as an effective tool for screening and follow-up of liver disease in patients undergoing MBS.

Keywords Bariatric surgery · NASH · Cirrhosis · Fibroscan · Liver biopsy

Background

The prevalence of non-alcoholic fatty liver disease (NAFLD) in the general population varies from 25 to 30%, increasing up to 90% in morbid obese patients [1]. It represents a spectrum, of which, a subset with more severe liver disease, namely non-alcoholic steatohepatitis (NASH), may progress to severe fibrosis, cirrhosis, and hepatocellular carcinoma [2]. Cirrhosis

frequently coexists in patients seeking metabolic and bariatric surgery (MBS), with 1–4% of patients found to have incidental liver cirrhosis during surgery [3]. While up to 69.5% patients have shown complete resolution of NASH after MBS [4], traditionally, cirrhosis of liver has been considered an irreversible pathology. Although some recent evidence has challenged this concept [5], there is still a dearth of literature on the safety and efficacy of MBS in patients with advanced

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