

Preoperative Treatment with Very Low Calorie Diet

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Obesity is the most significant risk factor for the development of non-alcoholic fatty liver disease (NAFLD), a term that encompasses a spectrum of liver pathology ranging from fatty liver alone

(hepatic steatosis) to concomitant hepatic inflammation (non-alcoholic steatohepatitis or NASH).

NAFLD is estimated to occur in 30 to 100% of obese adults and is associated with hepatic enlargement (hepatomegaly), elevated serum aminotransferase levels and insulin resistance.

In morbidly obese patients, any abdominal surgery is difficult because of reduced intraabdominal space due to an enlarged liver and an increased amount of intraabdominal fat. The enlarged left liver lobe obscures the gastro-esophageal junction and makes the dissection at the gastroesophageal junction and proximal stomach difficult. Furthermore, traction to a fatty liver may cause trauma with increased risk for bleeding. Technical difficulties due to an enlarged liver are one of the most common reasons for abandonment of the laparoscopic procedure and often leads to conversion to an open procedure. The successful laparoscopic bariatric procedure is associated with less postoperative pain, reduced risk of incisional hernia, better postoperative pain, reduced risk of incisional hernia, better postoperative pulmonary function, as well as shorter postoperative care when compared to open bariatric procedures.

There are different preoperative dietary regimens recommended to reduce liver size. Most studies support that a preoperative very low calorie diet induces moderate weight loss resulting in a significant reduction of intrahepatic fat content and liver volume. This moderate weight loss and reduction in liver volume facilitates the laparoscopic bariatric procedure by improving the exposure of the gastroesophageal and proximal stomach region.