

A Suture-Based Liver Retraction Method For Laparoscopic Bariatric Procedures: Results From A Large Case Series

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Background

In laparoscopic bariatric procedures, retraction of the left lobe of the liver is essential to visualize and operate on the stomach, esophagus, and other structures that lie beneath the liver. The conventional approach to liver retraction utilizes a mechanical retractor that is held by an assistant and requires an additional subxiphoid incision and port.

An ideal method for liver retraction during laparoscopic upper abdominal surgery would lift the liver out of the operative field in a nontraumatic manner, providing adequate space for visualization and operation for as long as required, and without the need for additional ports or assistance. Reducing the number of abdominal incisions will improve cosmesis and reduce risks for wound complications and postoperative pain.

Methods

In this article, we report a large case series utilizing suture-based method for retraction of the left lobe of the liver. This study is a retrospective chart review of consecutive cases utilizing the described techniques from surgeons at 2 institutions (University of Missouri Health System, Columbia, MO; and Des Peres Hospital, St. Louis, MO). The cases were performed over 2 years, between March 12, 2012 and March 10, 2014.

Results

In all, 487 cases were identified. Patients had a high rate of morbid obesity (83% with body mass index >40 kg/m²) and diabetes (34.3%). The most common bariatric procedures were Roux-en-Y gastric bypass (39%) and sleeve gastrectomy (24.6%). Overall, 6 injuries to the liver were noted, only 2 of which were related to the suture-based retraction technique. Both injuries involved minor bleeding and were successfully managed during the procedure. The mean number of incisions required was 4.6.

Conclusion

In this large case series of patients with a high rate of morbid obesity, we have reported the tolerability and efficacy of a suture-based method for liver retraction. The rate of liver complications related to the retraction method was extremely low (0.4%), and these events were minor and resolved without sequelae.



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