Magnetic retraction for NOTES transvaginal cholecystectomy

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Abstract

Background Natural orifice transluminal endoscopic surgery (NOTES) has the potential to decrease the burden of an operation on a patient. Limitations of the endoscopic platform require innovative solutions to provide retraction and create an operation comparable with the gold standard, laparoscopic cholecystectomy.

Methods Four patients underwent transvaginal cholecystectomy. All procedures were performed under laparoscopic vision to ensure safety. The endoscope and a long articulating RealHand instrument were placed via a 15-mm vaginal trocar. A magnetic retraction system was used to retract the gallbladder safely. Laparoscopic clips were used to ligate the cystic duct and artery. All four gallbladders were successfully removed. No complications occurred. The mean operating time was 102 min.

Results All four procedures were completed without complications. The four patients all were discharged shortly after surgery and reported normal sexual activity without pain.

Conclusions Transvaginal cholecystectomy can be completed safely using current technology. Further studies are needed to determine the safety of the procedure and to determine whether it confers any benefits other than cosmesis.

Keywords Cholecystectomy · Magnets · NOTES · Retraction · Transvaginal

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