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Title

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Journal

Surgical Endoscopy: And Other Interventional Techniques
Official Journal of the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) and European Association for Endoscopic Surgery (EAES), 24(9)

ISSN

1432-2218

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Publication Date

2010-09-01

DOI

10.1007/s00464-010-0954-9

Peer reviewed

Magnetic retraction for NOTES transvaginal cholecystectomy

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Received: 2 October 2008 / Accepted: 14 March 2009 / Published online: 23 February 2010
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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

Disclosures Santiago Horgan, Yoav Mintz, Garth R. Jacobsen, Bryan J. Sandler, John P. Cullen, Adam Spivack, David W. Easter, Alana Chock, Michelle K. Savu, Sonia Ramamoorthy, Julie Bosia, Sanjay Agarwal, Emily Lukacz, Emily Whitcomb, Thomas Savides, and Mark A. Talamini have no conflicts of interest or financial ties to disclose.

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Electronic supplementary material The online version of this article (doi:10.1007/s00464-010-0954-9) contains supplementary material, which is available to authorized users.

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