

NOTES: transvaginal cholecystectomy with assisting articulating instruments

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Abstract

Background Transvaginal cholecystectomy has been performed at several institutions using hybrid natural orifice transluminal endoscopic surgery (NOTES) techniques. **Methods** A 42-year-old woman with symptomatic cholelithiasis was taken to the operating room for transvaginal cholecystectomy after giving informed consent. A single 5-mm laparoscope was placed at the umbilicus, followed by a 15-mm trocar through the vaginal conduit. The endoscope and a long flexible RealHand surgical instrument (Novare, Cupertino, CA) were placed via the vaginal trocar. The cystic duct and artery were identified and clipped using laparoscopic clips from the umbilical port. The long articulating laparoscopic instrument provided stable retraction. Hook cautery was used to dissect the gallbladder, which was removed via the vaginal trocar. The vaginal incision was closed using a single figure-of-eight absorbable suture under direct vision. The procedure lasted 96 min.

Results The cholecystectomy was successfully performed without spillage of bile. The patient was kept overnight for observation only as a precaution. She reported no pain and did not require a discharge prescription for narcotics.

Conclusions The described technique for NOTES cholecystectomy results in a virtually scarless operation. The single 5-mm umbilical trocar allows for safe clipping of the cystic duct. Further work is needed to determine the efficacy of this approach.

Keywords Articulating grasper · Cholecystectomy · New technology · NOTES · Transvaginal

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