

IMELDA transvaginal approach to ectopic pregnancy: diagnosis by transvaginal hydrolaparoscopy and treatment by transvaginal natural orifice transluminal endoscopic surgery

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Objective: To demonstrate a new minimally invasive approach for the diagnosis and treatment of ectopic pregnancy.

Design: Stepwise explanation of the technique using original video footage.

Setting: Hospital.

Patient(s): Since 2014, 15 patients were treated transvaginally for ectopic pregnancy and pregnancy of unknown location (PUL).

Intervention(s): In case of a diagnosis of ectopic pregnancy on ultrasound, a 2.5-cm colpotomy is made under general anesthesia, and the ectopic pregnancy is treated by transvaginal natural orifice transluminal endoscopic surgery (vNOTES) salpingectomy or salpingostomy. In case of a PUL on ultrasound, transvaginal hydrolaparoscopy (TVHL), an established technique for fertility exploration under local or general anesthesia, is used to investigate. If a tubal pregnancy is confirmed on TVHL, the colpotomy is extended to a 2.5-cm incision, and the ectopic pregnancy is treated transvaginally by vNOTES. If the TVHL investigation of the pelvis is negative (fallopian tubes and ovaries are normal), the procedure is stopped and the patient is followed up further. If the TVHL is inconclusive, the NaCl is drained and CO₂ is insufflated (requiring general anesthesia) through the 4-mm TVHL port to improve visualization. Again, an ectopic pregnancy is then treated by vNOTES, and in case of a negative investigation the procedure is stopped and the patient is followed up further.

Main Outcome Measure(s): Successful diagnosis and treatment of ectopic pregnancies.

Result(s): All patients were successfully operated without complications or conversions to standard laparoscopy. Twelve patients were treated by vNOTES for ectopic pregnancy. Three TVHL explorations for PUL were negative, and these patients were followed up; two patients developed a normal intrauterine pregnancy, and the third patient was treated with methotrexate for persistent asymptomatic raised hCG levels.

Conclusion(s): Transvaginal hydrolaparoscopy and vNOTES are complementary techniques enabling gynecologic surgeons to explore PUL and treat ectopic pregnancies via minimally invasive transvaginal access without abdominal incisions. A negative TVHL investigation leaves only a 4-mm perforation in the pouch of Douglas that does not require suturing. The IMELDA technique for the investigation and treatment of PUL and ectopic pregnancy is a novel approach that requires further investigation. It can provide improved patient comfort and better cosmetic results. (Fertil Steril® 2017;107:e1–e2. ©2016 by American Society for Reproductive Medicine.)

Key Words: Ectopic pregnancy, NOTES, transvaginal, TVHL, vNOTES

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Received July 28, 2016; accepted September 13, 2016; published online October 25, 2016.

J.B. has nothing to disclose. J.V. has nothing to disclose.

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SUGGESTED READING

1. Van Peer S, Baekelandt J. Natural orifice transluminal endoscopic surgery (NOTES) salpingectomy for ectopic pregnancy: a first series demonstrating

how a new surgical technique can be applied in a low-resource setting. *Gynecol Surg* 2015;12:299–302.

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