

Vaginal Natural Orifice Transluminal Endoscopic Surgery (VNotes) Approach to Umbilical Hernia Repair Using Stratafix Suture

Case Report

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Introduction

This is the first case study of an umbilical hernia repair performed by a vaginal Natural Orifice Transluminal Endoscopic Surgery (vNOTES) procedure employing non-absorbable STRATAFIX suture (ETHICON, USA).

Case Report

In this case, a 50-year-old woman, with previous two normal vaginal delivery, presented with symptomatic heavy menstrual bleeding failed medical treatment, has LNG-IUD in place since 2019. Also, complaining of symptomatic umbilical hernia which noticed after laparoscopic cholecystectomy in 2003. She is scheduled for hysterectomy with bilateral salpingoophorectomy, and umbilical hernia repair via vNOTES technique.

After completing vNOTES hysterectomy and BSO using the 9.5cm size Gelpoint vPath (Applied medical, USA) and standard laparoscopic instruments used to detach the omentum from the umbilical hernia site (Figure 2,3) with caution. A small umbilical defect, measuring 1.5cm in size (Figure 4), was identified, and sutured using non-absorbable STRATAFIX 2-0 suture via vNOTES technique (Figure 5). At the end of the endoscopic phase of the procedure the Gelpoint platform was removed, the uterus (Figure 1), bilateral ovaries and fallopian

tubes were removed vaginally and vaginal cuff was closed in standard fashion. Total surgical time is 100 minutes for vNOTES hysterectomy, BSO and umbilical hernia repair. Total blood loss was less than 100 ml. Patient discharged next day, with stable vital signs, post operative hemoglobin of 14gr/dl with minimal pain, visual Analogue Scale is 2 that is controlled by paracetamol. Pathology report revealed uterus that has multiple benign endometrial polyps with progestin effects secondary to LNG-IUD, sub-serosal leiomyoma with adenomyosis. Both ovaries and fallopian tubes were unremarkable.

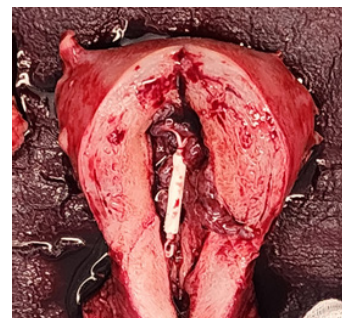


Figure 1: Uterus specimen with the LNG-IUD.

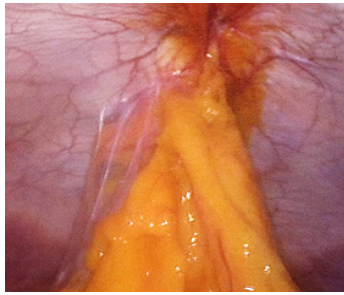


Figure 2: Omentum adhesion to the umbilical hernia site.

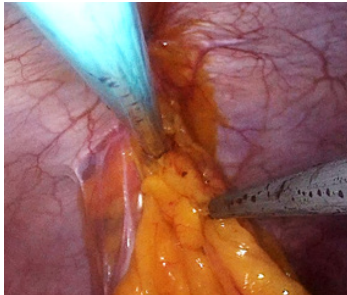


Figure 3: Dissecting the adhesion from the umbilical hernia site.



Figure 4: Clear edges of the umbilical hernia about 1.5 cm in size.

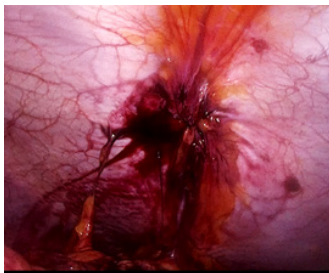


Figure 5: After closure of the umbilical hernia using non-absorbable STRATAFIX 2-0 suture.

Literature Review

vNOTES is an emerging technique providing less postoperative pain, shorter surgical times, shorter hospital stay, less estimated blood loss and better cosmetic results with no significant difference in intra and postoperative complications and readmission compared to

conventional laparoscopy [1,2]. Also, vNOTES hysterectomy provides favorable outcomes compared to conventional LH considering the shorter operation time, hospitalization, and lower 24 hours VAS score in undescended enlarge uterus [3]. Intraoperative conversion and perioperative and postoperative complications show that vNOTES hysterectomies seem to be feasible for obese patients [4].

Conclusion

vNOTES is a new surgical innovation that will open a new door to a scarless access into the abdominal cavity for different intra-abdominal procedures such as reproductive, colorectal, upper abdominal cavity (sleeve, GB, hernia) and urological procedures.

Acknowledgement

Informed Consent

The authors declare and informed consent taken from the patient for photographs and the material will be used for publications in scientific journal.

Conflict of Interest

The Authors declare no conflict of interest.

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Data Availability

The authors declare the availability of the data and videos if needed.

Author's Contributions

Baydaa AlSannan: Conceptualization, Data Collection, Writing-Original draft, Review & Editing, Funding acquisition.

Hanna AlRashidi: Data Collection, Writing-Original draft.

Amal Khader and Cihan kaya: Review and editing.

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