New Robotic SP Platform for Transvaginal Natural Orifice Transluminal Endoscopic Surgery (NOTES)

CHINA, January 3, 2024 /EINPresswire.com/ -- In a groundbreaking case, researchers showcased the innovative application of the new da Vinci SP platform designed for single-port surgery in the first transvaginal Natural Orifice Transluminal Endoscopic Surgery (NOTES) hysterectomy.

The surgical team and the da Vinci SP surgical system.

Transvaginal NOTES, introduced in 2012, has gained popularity for its integration of vaginal surgery fundamentals. The approach combines the natural orifice entry of the vagina with the manual extension of laparoscopic instruments, offering enhanced visualization of the surgical field. While this technique has evolved for procedures like hysterectomy, adnexal surgery, myomectomy, sacrocolpopexy and high uterosacral ligament suspension, persistent challenges in suturing, dissection and triangulation have limited its application in vaginal natural orifice transluminal endoscopic surgery NOTES (NOTES) procedures.

Previous studies have used the robotic Xi platform for NOTES surgeries, including pelvic floor dissection for complex endometriosis surgeries. However, the Xi platform faced challenges with instrumental collisions in transvaginal NOTES.

In a study published in the KeAi journal Intelligent Surgery, a team of US researchers explored a NOTES surgery that uses an advanced single-site robotic platform—known as da Vinci SP.

Using the new robotic platform, The research team successfully demonstrated ten surgical steps in the pilot case, which includes robotic hysterectomy, bilateral salpingectomy, lysis of adhesion and resection of endometriosis. Six weeks post-surgery, the patient reported a positive outcome with no surgical incision and minimal pain during the follow-up clinical visit.

Xiaoming Guan, lead researcher of the case report, highlighted that this was the first use of a robotic platform in transvaginal NOTES surgery. “Further studies with larger sample sizes and comparative analyses are crucial to confirming the feasibility and safety of employing this advanced platform,” added Guan.

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