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Letter to Editor

Single-port robot-assisted extended totally extraperitoneal repair for ventral hernia using the da Vinci single-port platform: A video vignette

Keywords: Minimally invasive surgical procedures

Ventral hernia repair

Extended totally extraperitoneal repair eTEP

To the editor,

The extended totally extraperitoneal (eTEP) technique, which was introduced for inguinal hernia by *Daes et al* in 2012, has been applied in cases of ventral hernia to prevent complications associated with intraperitoneal mesh. ^{1,2} Compared to the conventional technique, recent studies have shown that eTEP features less post-operative pain and a shorter hospital stay. ^{3–5} However, with respect to the surgical range of dissection from the xyphoid process to the arcuate line, eTEP has the disadvantages of a longer operation time, slower learning curve on surgery, and multiple sites for trocar insertion. ^{3–5} The robotic system boasts the advantages of a multijoint mechanism, ergonomics, and 3-dimensional vision, increasing the scope and convenience of surgical procedures. Herein, we present a video of the case of a ventral hernia treated with single-port robot-assisted eTEP.

A 37-year-old male without any surgical history visited our clinic complaining of a protruding umbilical mass. Ventral hernia was diagnosed as a 3.5 \times 3.0 cm incarcerated omental mass without any signs of bowel strangulation. We used the da Vinci SP platform (Intuitive Surgical, Sunnyvale, CA, USA) for the surgery. The surgical procedure was performed as shown in the video.

As an advantage over conventional techniques of eTEP, a single incision in the suprapubic region allowed the simultaneous dissection between both sides of the posterior rectus sheath and the rectus muscle without need for the crossover procedure. With regard to the robot system, 360° movement by its multi-joint mechanism provided surgical convenience and sophistication for the dissection and closure procedure. To the best of our knowledge, this is the first attempt of eTEP with the single-incision approach using the da Vinci SP platform. We expect more trials of this technique in the future as well as further analyses including long-term surgical outcomes such as recurrence rate.

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Ethics approval

This video article was approved by the Institutional Review Board of the Ethics Committee of the College of Medicine of The Catholic University of Korea (KC21ZISI0975).

Declaration of competing interest

The authors declare no conflict of interest for this article. It is the responsibility of the corresponding author to review this policy with all authors.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.asjsur.2022.01.042.

References

- Belyansky I, Daes J, Radu VG, et al. A novel approach using the enhanced-view totally extraperitoneal (eTEP) technique for laparoscopic retromuscular hernia repair. Surg Endosc. 2018;32:1525–1532.
- Daes J. The enhanced view-totally extraperitoneal technique for repair of inguinal hernia. Surg Endosc. 2012;26:1187–1189.
- Kumar N, Palanisamy NV, Parthasarathi R, Sabnis SC, Nayak SK, Palanivelu C. A
 comparative prospective study of short-term outcomes of extended view totally
 extraperitoneal (e-TEP) repair versus laparoscopic intraperitoneal on lay mesh
 (IPOM) plus repair for ventral hernia. Surg Endosc. 2021;35:5072–5077.
- **4.** Bellido Luque J, Gomez Rosado JC, Bellido Luque A, et al. Endoscopic retromuscular technique (eTEP) vs conventional laparoscopic ventral or incisional hernia repair with defect closure (IPOM +) for midline hernias. A case-control study. *Hernia*. 2021;25:1061–1070.
- Bui NH, Jorgensen LN, Jensen KK. Laparoscopic intraperitoneal versus enhancedview totally extraperitoneal retromuscular mesh repair for ventral hernia: a retrospective cohort study. Surg Endosc. 2021.

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