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VIDEO FORUM

Splenic flexure mobilization for sigmoid colon cancer with da Vinci SP® surgical system: a video vignette

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Splenic flexure mobilization (SFM) is an essential procedure for colorectal surgeons and categorized into three surgical approaches: anterior approach (dividing the gastrocolic ligament), inferio-medial approach (dividing the pancreaticocolic ligament), and lateral approach (dividing the phrenocolic and splenocolic ligament) [1]. All three methods should be used simultaneously for complete SFM. Recently, stepwise approach to laparoscopic SFM has been introduced by a previous video vignette [2, 3]. However, there has been no video vignette of single incision robotic SFM with the da Vinci SP® (dVSP) surgical system. Here, we describe an SFM with single incision robotic approach.

The patient was diagnosed with proximal sigmoid colon cancer without distant metastasis. In the operative field, the length of descending and sigmoid colon was relatively short. The SFM was mandatory for safe anastomosis without tension. The dVSP surgical system was utilized for the procedure. A 3.5-cm vertical umbilical skin incision was made and the single-port entry system with Uni-port (Dalim, Mapo-gu, Seoul, Republic of Korea) was applied. The dVSP cannula with four channels was inserted into the single-port entry system. A 12-mm camera and three 6-mm robotic instruments (monopolar curved scissor, fenestrated bipolar forceps, and Cadiere forceps) were inserted into each channel of the dVSP cannula. Through the remaining trocar of the single-port entry system, the surgical assistant performed an endoscopic suction and introduced gauze into the pelvic cavity. No additional laparoscopic port was required for the procedure [4].

We performed SFM by combining the three approaches. The inferio-medial, lateral, and anterior approaches were conducted, respectively. Because of the characteristics of single-incision robotic surgery, each approach has pros and cons. The inferio-medial approach phase can be performed easily because of the advantages of a stable surgical field in the narrow cavity. However, the lateral approach phase could only be implemented to a limited extent because of the robotic arms' range of motion. Because of the absence of energy devices, longer operative time and bleeding are required in the anterior approach phase. We hope that our video can be helpful for single-incision robotic surgeons.

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Data availability The data that support the findings of this study are available from the corresponding author upon reasonable request.

Declarations

Conflict of interest All authors have no conflicts of interest to disclose.

Ethical approval This study was reviewed and approved by the Institutional Review Board of Ewha Womans University Seoul Hospital [SEUMC 2023–01-023].

Informed consent Due to the retrospective nature of this study, the informed consent was waived by Institutional Review Board.

References

1. Lee YS (2019) Three surgical approaches of laparoscopic splenic flexure mobilization. J Minim Invasive Surg 22(2):85–86
2. Oosenbrug M, Guidolin K, Knol J et al (2023) A stepwise approach to laparoscopic splenic flexure mobilization - a video vignette. Colorectal Dis 25(3):509–510
3. Goksoy B (2022) Laparoscopic splenic flexure resection with "cranio-caudal dissection" in splenic flexure cancer - a video vignette. Colorectal Dis 24(8):1017–1018
4. Kim HS, Oh BY, Cheong C et al (2023) Single-incision robotic colorectal surgery with the da Vinci SP® surgical system: initial results of 50 cases. Tech Coloproctol 27(7):589–599

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