

Laparoendoscopic Single-Site Radical Cystectomy with 18 Months Follow-Up: Experience from a Chinese Center

Introduction and Objective: To report our experience of laparoendoscopic single-site surgery (LESS) for radical cystectomy and bilateral pelvic lymph node dissection with 18 months follow-up.

Materials and Methods: From November 2009 to August 2011, 10 patients (9 men and 1 woman) with organ confined bladder urothelium carcinoma underwent laparoendoscopic single-site radical cystectomy (LESS-RC). For convenience of the following sigmoid neobladder construction, hypogastric midline incision was used instead of transumbilical incision. After a 3-4 cm lower abdominal midline incision was made, Quadport or homemade single multichannel port was inserted. Homemade single port was made with two rings and a surgical glove technique. Bilateral pelvic lymph node dissection and radical cystectomy were performed using prebent and conventional straight laparoscopic instruments. Then the taenia myectomy sigmoid neobladder was constructed by open procedure through the initial incision which was enlarged slightly later. Follow-up was carried out at set intervals (1, 3, 6, 12, 18, 24, 36 months).

Results: Neither conversion to open or conventional laparoscopic surgery nor extra port was needed. The operative time of LESS procedure ranged from 130 to 330 min (mean 243 min). Estimated blood loss ranged from 50 to 600 ml (mean 270 ml). 5 patients needed blood transfusion. The pathologic evaluation revealed muscle-invasive bladder urothelial carcinoma with negative margins and pelvic lymph node in all cases. No mortality or severe complications were observed perioperatively. Within mean 18 months follow-up (3 patients with more than 24 months follow-up and 5 patients with 12 months follow-up) no evidence of recurrent or metastasis was detected. Continect was obtained in all patients during daytime after 3 months and only 2 patients need 1-2 security pads during nighttime.

Conclusion: LESS radical cystectomy was safe and technically feasible. Hypogastric midline small incision reduced distance between incision and surgical field and it was convenient. Homemade single port was cost-effective and easy to operate. Although medium-term follow-up of our study showed good cancer specific outcomes of LESS-RC, large sample study and long-term follow-up should be carried out to approve it.