

Comparison of robotic versus laparoscopic surgery for endometrial cancer staging surgery: our institution's experience

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Objective

◆ The objective of this study was to evaluate the feasibility and the safety of robot-assisted staging surgery with the DaVinci Xi system in endometrial cancer.

Material and Methods

◆ From June 2015 to June 2018, we retrospectively analyzed 56 patients who underwent laparoscopic or robotic staging surgery for endometrial cancer in our two hospitals.

◆ Perioperative data including age, parity, body mass index (BMI), previous op. history, preop. CA125 level, operation time, hospital stay, the number of lymph nodes retrieved, postoperative pain score, estimated blood loss and postoperative complications were compared.

Results

◆ Fifty six endometrial cancer patients were admitted for surgical staging of endometrial cancer. Out of these patients, 28 underwent robotic surgery and 28 underwent laparoscopic surgery.

◆ There were no differences in age ($p=0.523$), parity ($p=0.432$), BMI ($p=0.172$), op. history ($p=0.378$), co-morbid medical disease ($p=0.130$), and CA125 level ($p=0.072$).

◆ There was no difference in stage ($p=0.563$), extracted pelvic & paraaortic LNs ($p=0.076$).

◆ There were no differences in operative time ($p=0.062$), blood loss ($p=0.056$), hospital stay ($p=0.112$), Hb change ($p=0.219$), postoperative complications, postoperative pain (NRS score, postop. 6hrs, 24hrs, 48hrs).

Table 1. Patients' characteristics

Characteristics	Robotic surgery (N=28)	Laparoscopy (N=28)	P- value
Age	58.31 ± 7.95	59.6 ± 9.01	0.523
Parity	1.67 ± 0.86	1.63 ± 1.12	0.432
BMI, kg/m ²	25.75 ± 5.34	25.4 ± 3.67	0.172
Op. history	12 (42.8)	13 (46.4)	0.378
Co-morbid medical disease	18 (64.0)	19 (67.8)	0.130
CA125 level, IU/ml	27.46 ± 34.99	34 ± 46.29	0.072

Data were designated as mean ± SD or absolute numbers (%).

* P- value <0.05

Table 2. Histopathologic data

	Robotic surgery (N=28)	Laparoscopy (N=28)
Endometrioid	26 (92.0)	27 (96.4)
Clear cell	1(3.5)	0
Serous	1(3.5)	1(3.5)
Mixed	0	0

Data were designated absolute numbers (%)

Table 3. Postoperative outcomes

Outcomes	Robotic surgery (N=28)	Laparoscopy (N=28)	P- value
Operative time, min	180 ± 57.86	193.4 ± 75.30	0.062
Estimated blood loss, mL	382.6 ± 207.37	454.0 ± 163.99	0.056
Hospital stay, day	8.82 ± 5.29	8.09 ± 2.07	0.112
Hb change (POD#1)	-2.0 ± 1.19	-1.8 ± 1.64	0.219
NRS score			
Postoperative 6hrs	2.1 ± 1.93	2.7 ± 2.68	0.664
Postoperative 24hrs	1.53 ± 0.88	1.8 ± 1.19	0.060
Postoperative 48hrs	1.17 ± 1.02	1.2 ± 0.42	0.551
Return of bowel activity, day	1.32 ± 0.80	1.5 ± 0.54	0.560
Intra& postop. Complication	0	0	
Stage			0.563
Stage I	23 (82.0)	19(67.8)	
Stage II	3(10.7)	3(10.7)	
Stage III	2(7.1)	5(17.8)	
Stage IV	0	1(3.5)	
Extracted pelvic & para-aortic LN	21.42 ± 10.62	23.54 ± 13.26	0.076

Data were designated as mean ± SD or absolute numbers (%).

* P- value <0.05

Conclusion

◆ Robotic staging surgery with daVinci Xi system is feasible for endometrial cancer. Prospective and randomized studies are needed to assess the benefit of the robotic staging surgery in endometrial cancer.