25592 Robotic vs laparoscopic sacrocolpopexy during the learning curve

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Aims of study

Over the past decade, robotic sacrocolpopexy has gained popularity and is now one of the most common surgical treatment for POP.
However none of the existing data has demonstrated the superiority of robotic sacrocolpopexy over laparoscopic sacrocolpopexy. Of note, all the existing series compared those two approaches performed by highly experienced laparoscopic surgeon.
The aim of the present study was to compare the outcomes of robotic vs sacrocolpopexy performed by surgeon in training while in their learning curve.

Materials & Methods

The charts of all consecutive patients who underwent minimally invasive sacrocolpopexy for POP at a single academic center between 2013 and 2023 were retrospectively reviewed.
The patients having undergone laparoscopic or robotic sacrocolpopexy by surgeons in training with an experience < 20 cases of either of the two procedures were included. The patients were divided in two groups: laparoscopic vs robotic.

Results

Out of 197 minimally invasive sacrocolpopexy, 131 were included in the present analysis :
- 39 in the laparoscopic group
- 92 in the robotic group

The patients characteristics were similar in both groups although there tended to be more patients with an history of previous POP repair in the robotic group
(17.4% vs 5.3% ; p=0.09).

The mean operative time was significantly shorter in the robotic group
(202.6 vs 229.3 min ; p=0.02).

The postoperative complications rates were comparable in the two groups
(22.9% vs 16.7% ; p=0.42).

The length of stay was significantly shorter in the robotic group
(median : 2 vs 3 days ; p=0.04).

After a median follow-up of 12 months, the anatomical success rates were similar in the laparoscopic and robotic groups
(90.9% vs 80.6% ; p=0.37)

and so were the subjective success rates
(100% vs 95.8% ; p=0.25).

There was no mesh related complications in any of the two groups.

	Autologous bandlets N=11	Synthetic bandlets N=54	p-value
Mean operative time (min)	190	165,2	0,14
Mean length of hospital stay (days)	4,2	1,8	0,007
Readmission	2 (18,2%)	1 (2%)	0,08
Baden-Walker grade ≥ 1 cystocele or uterine prolapse at 3 month follow-up	1 (10%)	4 (7,9%)	0,98
PGII 1 or 2 at 3 month follow-up	11 (100%)	46 (91,3%)	0,99
New surgery for POP relapse	0 (0%)	2 (3,8%)	0,99
PGII 1 or 2 at last follow-up	11 (100%)	48 (95,5%)	0 ,99
Baden-Walker grade ≥ 1 cystocele or uterine prolapse at last follow-up	0 (0%)	6 (11,8%)	0,27
Mean follow-up time (month)	6	17	0,64

Conclusions

The robotic approach may outperform the laparoscopic approach in terms of peri-operative outcomes for sacrocolpopexy during the learning curve.
However, we did not observe significant differences between the two approaches in terms of anatomical and subjective success rates.

References

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