572

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COMPARATIVE OUTCOMES OF ROBOTIC ASSISTED SACROCOLPOPEXY AND SACROCOLPOPERINEOPEXY: A COHORT STUDY

Hypothesis / aims of study

To compare the short-term outcomes of the traditional robotic sacrocolpopexy (RALSCP) to sacrocolpoperineopexy (RALSCPP) for the repair of pelvic organ prolapse (POP).

Study design, materials and methods

We conducted a retrospective cohort study comparing these 2 approaches. RALSCPP was performed by introducing the polypropylene Y-shaped mesh through a perineal vaginal incision, and passing it through the rectovaginal space into the posterior cul-de-sac. The mesh was then retrieved and the procedure completed laparoscopically. Women who underwent repairs between January 2009 and December 2010 were included .The primary outcome was vaginal vault support as measured by postoperative POP quantification (POP-Q) system examination. Secondary outcomes were vaginal mesh exposure rates, blood loss, and complications rates. Statistical analysis was performed using SPSS 18; chi square tests, Mann-Whitney test, and Independent t-test were used as appropriate.

Results

The analysis included 84 patients (56 RALSCP= Group I and 28 RALSCPP= Group II). There were no differences in age, parity, BMI, HRT, menopausal status, and performance of concomitant sling and/or hysterectomy. Mean follow up was 140 days (+/- 110) for group I and 151 days (+/- 109) for group II (p=0.65). Apical support cures rates defined as (C<-1) was similar between both groups; 95 % (53/56) for group I (Median -8) and 100 % (28/28) for group II (Median -7) (p=0.55). Anatomical cure rates for the anterior vaginal wall (Ba<-1) were higher in Group I 96 % (54/56) (Median -2) compared to 82 % (23/28) (Median -2) for Group II (p=0.04).Cure rates for the posterior vaginal wall (Bp<-1) were 100 %(56/56) for group I (Median -3) and 96 % (1/28) for group II (Median -3) (p=0.33). There was a slightly shorter vaginal length in the RALSCPP group (Median 8 cm) compared to RALSCP group (Median 8.5 cm) (p=0.06). Vaginal mesh exposure rate was 23% (13/56) for group I and 7 % (2/28) for group II (p=0.08). Incidental vaginotomy during dissection was similar between Group I and Group II (12/56 vs. 5/28; p=0.56). In analyzing the whole cohort, subjects with incidental anterior vaginotomy have a higher risk of developing vaginal mesh exposure (RR=5.5), compared to those without vaginotomy (p= 0.05). No difference was observed regarding concomitant hysterectomy (27/53 and 6/28 in group I and II respectively; p=0.89). There was a statistically significant higher blood loss in the RALSCPP group (Median 50 ml vs. 125 ml; p= 0.02), although no transfusions were performed.

Interpretation of results

The overall anatomical success rate for RALSCPP and RALSCP was 97.5 % for apical vaginal support, comparable to the rate previously reported in the literature [1]. RALSCPP had a lower success rate for the anterior vaginal wall support compared to RALSCP, which may be due to the redistribution of pressure forces in the pelvis (posteriorly the mesh was attached to the perineum). This study demonstrates the RALSCPP, which entails introducing the mesh through a vaginal incision is was associated with a mesh exposure rate of 7 % compared to the high exposure rate of 40 % previously reported in the literature [2]. The high rate of mesh exposure in the RALSCP group may be due to incidental vaginotomies during dissection and early learning curve in robotic surgery, and was not associated with the presence or absence of concomitant hysterectomy.

Concluding message

This study suggests that RALSCPP has a similar short-term anatomical outcomes compared to RALSCP, with a slightly better support for the anterior vaginal wall in the RALSCP group. RALSCPP had a statistically higher blood loss compared to RALSCP. The decreased risk of mesh exposure in the RALSCPP did not reach statistical significance in this small series. Long-term data are needed to assess the durability of this new approach especially to evaluate its full benefit regarding the posterior vaginal wall prolapse.

References

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