1. **What were the primary and secondary outcomes?**

The primary outcome was to assess the subjective outcomes (patient’s reported symptoms) by using validated questionnaires. The Pelvic Floor Impact Questionnaire (PFIQ-7) and the Pelvic Floor Distress Inventory (PFDI-20) \(^1\) were selected. These are evaluated by their total score (TS) range (0-300) and their three respective subscales. Each of these subscales has a score (0-100), the highest number represents more severe symptoms in the total questionnaire score and each of its subscales. In order to measure the subjective outcomes we calculated the improvement rate at one year. Clinical significance was determined in those women who improved >70% in their total questionnaire scores when compared to preoperative scores. Other authors have previously utilized this cutoff when assessing validated questionnaires.\(^2\)

The secondary outcomes included objective and complication outcomes. Objective outcomes were assessed by Baden-Walker grading system.\(^3\) Postoperative pelvic organ prolapse grading was compared to preoperative status. Clinical improvement (clinical significance) was determined if there was no apical prolapse recurrence (grade 0/1). Additionally we reported the incidence of complications, such as mesh extrusion, bowel injury, wound infection, incisional hernia at port site, readmission to the hospital within the first thirty postoperative days, postoperative ileus and voiding dysfunction.
2. *How was subjective clinical improvement defined? What other definitions could have been used?*

Subjective clinical improvement was determined in those women who improved more than 70% in their questionnaire total score at one year when compared to pre-op data. This was based on a rigid assessment utilized by the Urinary Incontinence Network in women for stress urinary incontinence. Those women with less than 70% improvement in both PFDI-20 and PFIQ-7 at one-year follow up were determined as having negative outcomes. Other definitions could have been established relying on less strict criteria like pure statistical significance (p>0.05) or based on confidence intervals. However we thought that a percentage number would be easier to interpret and to critique.

3. *Briefly describe the surgical technique? How does it differ from how the procedure is performed at your institution?*

Elliot’s group described the robotic surgical technique mentioned in our manuscript in 2004. This procedure was performed using four robotic arms and having an assistant at a right sided port. After pneumoperitoneum is achieved the ports are placed and the robot is docked on the left side, in a parallel orientation to the bed. A vaginal manipulator system is placed in the vagina. The procedure is started by mobilizing the descending colon towards the left side laterally to expose the sacral promontory. The longitudinal ligament of the sacrum is exposed by opening the peritoneum overlying it. A retroperitoneal tunnel is developed from the sacrum promontory to the posterior vaginal wall. The peritoneal edge is then identified at the vaginal cuff or cervical junction. This is then dissected anteriorly and posteriorly. A pre-made large pore polypropylene Y-mesh (IntePro, TM, AMS, Minnetonka, MN, USA) is secured to the anterior and posterior vaginal cuff wall with about five interrupted sutures respectively using ePTFE (Gore-Tex W.L. Gore & Associates, Inc. Newark, DE, USA) to aid with this step. At this point, the vaginal laxity to the apex is reduced and the tail of the mesh is secured to the sacrum. Vaginal examination is performed to assess suspension. Two to three polyester sutures are used to secure the apex of the mesh to the sacrum, at the longitudinal ligament. Adequate tension is verified by the surgeon’s assistant. The mesh is retroperitonealized using a polyglactin 910 running suture to close the peritoneum.

Our procedure differs from the one originally described by Elliot by the parallel-docking of the robot and tunneling of the mesh under the peritoneum instead of dividing and transecting this entirely.

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4. **What was the sample size calculation based on? What variables were included?**

   This was a retrospective review that included all patients who underwent sacrocolpopexy to address apical pelvic organ prolapse. A power calculation was performed to look for predictors. A sample size of 32 women was calculated ($\alpha=0.01; \beta=0.95$) to look for a 70% difference in the primary outcome. Categorical data were assessed versus the primary outcome (failure to attain 70% improvement at >12 months in both PFDI-20 and PFIQ-7 total scores) using Pearson's Chi Square test. A stepwise logistic regression model was built from significant ($p<0.05$) univariate relationships, assessed for clinical plausibility and a final multivariate model was constructed for the most explanatory variables.

5. **What were the loss to follow up rates at 6 and 12 months? How does this affect the results?**

   127 women had complete follow up data at 6 months and 92 had at least one year follow up data. There was no loss in follow up, but rather 35 women who did not have met the one year follow up time-point and for this reason we don’t think that affects the results. Furthermore the extra 35 women included at 6 months provide adverse events data that we think was valuable to our study report.

6. **Was the race and ethnicity of the participants reported? Is this information relevant?**

   This was not reported. Caucasian women comprised more than 95% of the sample.

7. **What were the objective and subjective clinical improvement rates?**

   According to our definition all women had objective improvement. Nonetheless there were six women with anterior POP grade II and one woman with grade III. Subjective improvement was present in 72% by PFIQ-7 and in 68% by PFDI-20.

8. **What were predictors of poor clinical outcome in logistic regression?**

   Predictors of poor clinical outcomes were lysis of adhesions 40% vs. 10% (OR 5.83 SD+/-4.6; 95%CI [1.2-27.4] $p=0.026$); urethrolysis 13% vs. 3% (OR 11.91 SD+/-13.9; 95% CI [1.2-117.9] $p=0.034$); current smoking 20% vs. 6% (OR...
7.9 SD +/- 8.1; 95% CI [1.1-58.7] p=0.042; older 64 vs. 58 years old (OR 1.1 SD +/- 0.04; 95% CI [1.0-1.18] p=0.044).

9. Why do you think lysis of adhesions was associated with poor clinical outcome?

This was an interesting finding that only leaves us with speculations. This is the first trial to our knowledge where lysis of adhesions surgery has been associated with poor subjective outcomes. We expect other trials to look at this particular variable that is not always included and it appears to play an important role. Further research may elucidate this. We think that previous abdominal surgery and in specific prior genitourinary surgery may be associated to more difficult prolapse to treat and higher quality of life expectations.

10. Were the American Urological Association index questionnaire results reported?

No the AUA Index scores were not reported as these are not used frequently for women. We only reported the quality of life question.

11. What were the limitations of the study? Please include limitations not addressed in the manuscript in your answer.

We believe we describe all the limitations of our cohort analysis.

References: