

## SURGICAL OUTCOMES IN APICAL DEFECT REPAIR: COMPARISON OF VAGINAL AND SACROCOLPOPEXY APPROACH

### Hypothesis / aims of study

There are multiple surgical techniques to correct apical pelvic organ prolapse (POP). In our center, the most commonly used techniques are sacrospinous ligaments fixation (SSLF) using sutures, harpoons (anchors or splentis) or meshes (Posterior Prolift System until 2012), uterosacral ligaments fixation (USLF) and sacrocolpopexy (SCP). We also used modified McCall's culdoplasty as other option for mild to moderate apical defect repair. The Prolift System was abandoned following the mesh complications FDA warnings. SCP is considered the current standard surgical technique, with reported success rates of 78% to 100%. SSLF and USLF are comparable in their results, with a surgical success rate of 63.1% and 64.5%, respectively. According to the Cochrane Review 2016, SCP is associated with a lower risk of symptomatic POP, recurrent POP, reoperation for POP, post-operative urinary incontinence (UI), and dyspareunia compared to vaginal techniques. The only disadvantage is longer operative time.

The aim of our study is to compare SCP outcomes with vaginal techniques in patients operated for apical POP in our center.

### Study design, materials and methods

We performed a retrospective analysis from our prospective collected database. Patients with apical POP who underwent vaginal or abdominal surgery between 2008 and 2016 in our urogynecology section were included. Surgical success was assessed using a composite outcome (symptomatic recurrence defined as bulge sensation or anatomic apical recurrence beyond the hymen or POP reoperation or pessary use for POP symptoms). In addition, the most commonly complications associated with each procedure are described. Patients with incomplete information, without postoperative follow-up, and those submitted to a surgical technique other than those mentioned above were excluded. Results are shown as mean  $\pm$  standard deviation, median (interquartile range) or number (percentage) as appropriate. T-Test, Mann Whitney U, Chi square, Fisher exact test and one-way Anova were used as appropriate. Multivariable analysis was performed using Cox Proportional hazard.

### Results

491 patients were included in the analysis. Demographics and clinical characteristics: Age 59 (52-66) years, BMI 29 (26  $\pm$  31) kg/cm<sup>2</sup> and parity 3 (2-4) children. 280 (57%) were sexually active. 393 (80.5%) patients had stage III or IV POP. Worse baseline C and Ba points were found for SCP compared to vaginal surgeries, 3.9 $\pm$ 2.3 vs. 2.1 $\pm$ 2.3 and 2.7 $\pm$ 4 vs. -0.5 $\pm$ 3.7 respectively ( $p < 0.0001$ ). 45 (9.2%) had previous hysterectomy, 24 (4.9%) had previous POP surgery and 13 (2.6%) had previous SUI surgery. 194 (39.5%) patients underwent SCP and 297 (60.5%) had vaginal surgery. Surgical procedures were: 44 (9%) USLF, 79 (16.1%), SSLF, 173 (35.2%) McCall, 104 (21.2%) open SCP and 90 (18.3%) laparoscopic SCP. 81 (16.5%) had concomitant hysterectomy, 135 (27.5%) had concomitant anterior or posterior colporrhaphy and 228 (46.4%) had concomitant midurethral sling. Lpx SCP was significantly longer than the other procedures (mean 210 min vs. range between 140-90 min,  $p < 0.001$ ). Follow-up was 11 (3-25) months. Using the composite outcome, the overall recurrence rate was 10.6%. There was an anatomic recurrence rate (point C > 0) of 8.4% and a symptomatic recurrence rate of 8.1%, 11 (2.2%) patients had a repeated POP surgery. In a univariate analysis the following were associated with our composite outcome: apical repair technique, concomitant posterior colporrhaphy, POP-Q stage III or IV, preoperative point C value and preoperative Bp point value. In a Cox proportional analysis including the previously described variables, and additionally age and POP-Q stage III or IV, the only variable that persisted associated with our composite outcome was the Bp preoperative point OR 1.1 (CI 95% 1.004-1.230). There were 14 (2.8%) mesh extrusions (12, 1 and 1 for Prolift, open SCP and Lpx SCP respectively,  $p < 0.0001$ ) and 26 (5.5%) cases of de novo dyspareunia, none in the SCP group ( $p < 0.0001$ ).

### Interpretation of results

The overall composite outcome recurrence was 10%. The preoperative Bp point is the only parameter associated with greater surgical failure. There were no differences in the recurrence rate. However, baseline characteristics differed between groups, a detailed patient selection for each technique could be influencing the good results. SCP was not associated with dyspareunia and with very low mesh extrusion rate, Lpx SCP was significantly longer than the other procedures.

### Concluding message

There were no differences in recurrence rate between surgical techniques.

### Disclosures

**Funding:** none **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Comité de ética del Hospital Dr. Sotero del Rio **Helsinki:** Yes **Informed Consent:** No