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Colpocleisis surgery in women over 80 years old with severe triple compartment pelvic organ prolapse

Haim Krissi [a,*], Amir Aviram [a], Edward Ram [b], Ram Eitan [a], Arnon Wiznitzer [a], Yoav Peled [a]

[a] Urogynecology Unit, Department of Obstetrics and Gynecology, Helen Schneider Hospital for Women, Rabin Medical Center, Petach Tikva, Israel[1]
[b] Division of Surgery, Hasharon Hospital, Rabin Medical Center, Petach Tikva, Israel[1]

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ABSTRACT

Objective: To compare outcomes of Le Fort colpocleisis surgery, between women over 80 years old and younger women.

Study design: We searched the medical files for all consecutive women who underwent Le Fort colpocleisis as a primary or recurrent surgery for severe pelvic organ prolapse at our university-affiliated tertiary center between February 2007 and July 2013. Exclusion criteria for performance of the procedure were post-menopausal bleeding, pelvic malignancy, pelvic irradiation, and the desire to preserve coital function. The objective and subjective recurrence of prolapse, intraoperative and postoperative complications, and patient satisfaction were measured.

Results: Forty-seven women underwent Le Fort colpocleisis. Of them, 23 were above 80 years, mean age 84.0 ± 3.3, oldest: 91; and 24 were 80 years old and younger, mean age 70.8 ± 6.1, youngest: 61. There were no intraoperative complications. Postoperative complications were recorded for 2 women with lower urinary tract infection and one woman had longer hospitalization time for warfarin treatment adjustment (9 days). Objective cure rates were 82.7% (19/23) and 83.3% (20/24), $p = 0.32$, for women over 80, and women aged 80 and younger, respectively. The subjective cure rate was 86.7% (20/23) and 91.6% (22/24), respectively, $p = 0.28$.

Conclusions: Objective and subjective cure rates of Le Fort colpocleisis in women over age 80 years were similar to those for younger women. The complications were mild and few, and unrelated to age. This procedure may be offered for women over 80 years old with severe symptomatic pelvic organ prolapse and medical comorbidities.

Introduction

Symptomatic pelvic organ prolapse (POP) is a common condition that negatively affects the quality of life of women. Lifetime prevalence is 3–6% [1,2]. Women of all ages may be affected, although prevalence increases with age [3]. POP may cause a sense of bulging or protrusion in the vagina, urinary outlet obstruction, and difficult defecation. Sexual activity, body image, and quality of life may be negatively affected [4–6].

Conservative treatment such as vaginal pessaries should be considered before surgery, especially in medically frail women who have symptomatic debilitated prolapse. However, pessaries are not suitable for all and women who are non-compliant, or need but do not have a caregiver to assist them, should not be fitted with a pessary.

The preferred definitive treatment for POP is reconstructive pelvic floor surgery aimed to restore vaginal anatomy and coital function. However, women aged 65 years and older who underwent reconstructive urogynecologic surgery were reported to have up to a 13.6-fold higher risk of postoperative morbidity and mortality than younger women, with the most common complications occurring in women 80 years and older, and the rate of mortality increasing with each decade of life [7,8].

In contrast to reconstructive surgery, partial colpocleisis, described in 1877 by Leon Le Fort, is a procedure for closure of the vagina that is suitable for frail or elderly women who do not wish to preserve coital function [9,10]. Le Fort colpocleisis is relatively easy to perform and can be done under local anesthesia. Compared to reconstructive pelvic floor surgery, operative time is

* Corresponding author at: Department of Obstetrics and Gynecology, Helen Schneider Hospital for Women, Rabin Medical Center, Petach Tikva 49100, Israel. Tel.: +972 3 6194876; fax: +972 3 9377585.
E-mail address: haimkr@clalit.org.il (H. Krissi).
[1] Affiliated with Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel.

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shorter, rates of morbidity and blood loss lower, recovery faster, and anatomic success higher [11,12]. Patients who are ideal candidates for Le Fort colpocleisis usually have poor functional status, with medical comorbidities rendering them unsuitable for extensive reconstructive procedures [13].

The purpose of our study was to evaluate the outcome of Le Fort colpocleisis in women over age 80 years with associated medical comorbidities and severe (stage 3–4) pelvic organ prolapse, compared to younger women.

Methods

Patients

We searched the records of a university-affiliated tertiary medical center for all consecutive women who underwent Le Fort colpocleisis as a primary or recurrent surgery for severe POP between February 2007 and July 2013. Those for whom follow-up data were available were included in the current analysis. The Le Fort procedure was performed in sexually inactive women who had stage 3 or 4 triple compartment (anterior posterior and apical) prolapse, with significant medical risk for comprehensive reconstructive pelvic surgery, who refused or failed to use a pessary. Exclusion criteria for performance of the procedure were postmenopausal bleeding, pelvic malignancy, pelvic irradiation, and the desire to preserve coital function.

Prior to surgery, history taking accessed information regarding prolapse, urinary, bowel, and sexual symptoms, according to the appropriate standardized International Continence Society (ICS) definitions [14]. Each woman underwent a routine physical examination and site-specific vaginal examination in the lithotomy position with a Sim's speculum, during a maximal Valsalva maneuver. Each vaginal compartment was evaluated for defects in pelvic support. All measurements and staging were performed according to the ICS scoring system for pelvic organ prolapse quantification (POP-Q) [14].

Preoperative multichannel urodynamic evaluation with prolapse reduction was performed to assess any bladder symptoms and identify occult incontinence or voiding difficulties. In cases where the POP was combined with stress incontinence, additional surgery for incontinence was performed. However, in cases of hypotonic bladder, defined by multichannel urodynamic evaluation or residual urine higher than 150 ml after prolapse reduction, we avoided the anti-incontinence procedure due to risk of long term voiding problems and the possible difficulty of the elderly patients to perform self-clean intermittent catheterization. Vaginal ultrasound examination was performed for all patients, including assessment of endometrial thickness to exclude pelvic uterine pathology. If endometrial thickness was more than 4 mm, endometrial sampling was taken before surgery to exclude pathology.

Our standard protocol included preoperative medical clearance, one dose of antibiotic (Cefazolin 1 g and Metronidazole 500 mg), and prophylaxis for deep vein thrombosis. We offered to all patients local anesthesia with sedation; however, the final mode of anesthesia was discussed and decided between the anesthesiologist and the patients, according to medical safety and patient preference.

The Le Fort procedure

Colpocleisis was performed as previously described in detail [15]. Essentially, rectangular portions of the anterior and posterior vaginal walls were demarcated with a sterile marker, local infiltration with saline was injected to the area, and the epithelium was removed with sharp dissection. The denuded areas were then sewn together front-to-back in progressive rows of 1 vicryl interrupted suture. A high perineorrhaphy was performed for all patients. If decided, concomitant tension free mid-urethral tape was performed. The size of the removed vaginal mucosa according to the vaginal length and width. The demarcated areas were from the bladder neck anteriorly, and 3 cm posteriorly, to 2 cm from the distal cervix.

During surgery, all patients were fitted with a ureteral catheter, which was left in place until the following day. Our routine recommendation was to mobilize patients on the same day of surgery, if possible. The first postoperative follow-up visit was 2 months following surgery in our outpatient clinic, and every 6 months, thereafter. During follow-up visits, women were reassessed for symptoms and signs of recurrence, including vaginal examination. For apical prolapse measurement, the proximal vaginal end was considered the "vaginal cuff".

Outcome measures

Objective cure was defined as prolapse less than stage 2 in any site, and subjective cure defined by no symptoms of prolapse sensation in the last follow-up visit. Patients' preoperative, intraoperative, and postoperative data were obtained from the institution's computerized database. The operative reports were reviewed to confirm the type of anesthesia, estimated blood loss, and intraoperative complications.

Statistical analysis

Statistical analysis was performed with the SPSS software, version 20.0 (Chicago, IL). Student's *t*-test was used for comparison of quantitative variables between groups. The Chi-square test was used to compare qualitative variables. The Wilcoxon signed rank test was used to compare POP-Q measurements before and after surgery. A p value of less than 0.05 was considered statistically significant.

The study was approved by the local Institutional Review Board.

Results

Patient characteristics

Between February 2007 and July 2013, 47 patients underwent Le Fort colpocleisis; 23 (48.9%) were above 80 years old. Pre- and postoperative data were available for all women. The mean age of the older group was 84.0 ± 3.3 years, range 81–91; and of the younger group, 70.8 ± 6.1, range 61–80, $p < 0.001$. Mean body mass index, follow-up duration, number of vaginal deliveries, and rate of previous hysterectomy were similar. All patients had medical comorbidities. Patient characteristics and medical comorbidities are presented in Table 1. Preoperative POP-Q measurements, and urinary and defecation symptoms were similar for both age groups (Table 2).

Operative characteristics

All patients underwent high perineorrhaphy and 7 (14.9%) underwent tension free mid-urethral sling placement for urinary stress incontinence (6 TVTO and 1 TVTS). In the younger group, 20.8% (5 women) had mid-urethral sling vs 8.7% (2 women) in the older group, $p = 0.24$.

There was no statistically significant difference in the mode of anesthesia between the groups; in the above 80 years group, 47.8% (11 women) had local or regional anesthesia vs 20.8% (5 women) in the younger group, $p = 0.13$. There were no intraoperative complications. No patient received blood transfusion postoperatively. The postoperative complications included 2 women (4.2%)