

Comparing quality-of-life scores on patients with sacrospinal ligament fixation versus LeFort colpocleisis for pelvic organ prolapse

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ABSTRACT



Aim. Pelvic organ prolapse negatively affects the women's quality of life and often require surgical treatment. There are several therapeutic options for pelvic organ prolapse. The aim of this study was to compare the quality of life in patients with pelvic organ prolapse treated by either sacrospinous ligament fixation or LeFort colpocleisis.

Materials and Methods. This prospective cohort study was conducted in our urogynecology clinic on 51 patients (29 sacrospinous ligament fixation, and 22 LeFort colpocleisis). The patients were evaluated 6 months postoperatively, using the The Prolapse Quality of Life Score.

Results. The study sample showed that there was no significant difference in quality of life between the two groups. There was no significant difference in PQOL scores for all components analyzed. There was only a significant positive correlation in role-limiting scores related to BMI in patients who had a sacrospinous fixation group ($p < 0.05$). In our sample, the sacrospinal ligament fixation group was younger than the LeFort colpocleisis group.

Conclusions. Recurrence rates in sacrospinous ligament fixation surgery are high. LeFort colpocleisis should be considered as the first option in patients with comorbidities and without sexual activity.

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Introduction

Pelvic organ prolapse (POP), is a relatively common disorder, affecting up to 30% of the women during their life, when a decrease in the quality of the life can be registered [1]. The current surgical management for POP, out of mesh surgery, includes reconstructive procedures like sacrospinous colpopexy or sacral colpopexy and obliterative procedure LeFort colpocleisis. Most of these patients have chronic (cardiovascular, renal, endocrine or pulmonary) comorbidities, and the treatment options are chosen taking into account not only degree of the pelvic prolapse but also presence and severity of comorbidities [2].

In the sacrospinous ligament fixation (SSLF) procedure the vaginal apex is suspended to sacrospinous ligament. Amreich described the procedure in 1951, while Randall and Nichols popularized the right SSLF [3-5]. There are several techniques and devices that are suggested/

available for placing the suture through the sacrospinous ligament [4]. The objective cure rates ranged from 67 to 97 percent [6]. The recurrence rate of apical prolapse was reported in 2 to 19 percent of women, and of previous vaginal wall prolapse in 6 to 29 percent after SSLF [7, 8].

Colpocleisis is the obliteration procedure first described by LeFort in 1877 for patients with uterovaginal or vaginal prolapse who are unwilling to retain their vaginal function for intercourse, while SSLF is a reconstructive procedure performed vaginally [9]. The purpose of this study is to evaluate and compare the effect of these two procedures on the quality of life.

Prolapse Quality of Life Score (P-QOL) has been developed by Digesu et al in 2005 [10]. P-QOL questionnaire is specific for POP and thus reliable and valid, being an instrument able to characterize symptom severity, impact on quality of life, as well as to evaluate treatment.

Materials and Methods

Fifty-one women were enrolled in the study, treated surgically either by SSLF (n:29) or LeFort colpocleisis (n:22). This prospective cohort study was approved by the local ethic committee, and an informed consent was signed by all participants to the study. Patients were interviewed by an expert gynecologist in the sixth month postoperatively. The demographic information related to age, parity, BMI, marital status, educational status, were included in the interview. Then all the participants were asked to complete a verbal questionnaire P-QOL. The responses ranged from “none/not at all”, through “slightly/a little” and “moderately” to “a lot”. A four point scoring system for each item was used for the severity measurement of urogenital prolapse symptoms. Scores in each domain range between 0 and 100. A high total score indicates a greater impairment of quality of life, while a low total score indicates a good quality of life.

Statistical Analysis. NCSS (Number Cruncher Statistical System) 2007 Statistical Software (Utah, USA) was used for the data analysis. For univariate analyses continuous data were reported as mean sd. T test were used to compare groups within variations. Mann Whitney U test were used to compare groups with abnormal variation. Fisher-Freeman-Halton test was used to compare qualitative data. Statistical significance was accepted at a P value of <0.05.

Results

The mean age of the patients was 63.43±12.89 (37- 88) years. The mean age of the patients was significantly low in patients who underwent SSLF compared to mean age of the patients who benefited by LeFort colpocleisis (p<0.001). No significant difference was observed in parameters BMI and educational status, respectively (Table 1).

There was statistically no significant difference at PQOL scores in all of the components studied, including

general health perception, prolapse impact, role limitation, personal relationship, emotional status, sleep/ energy and severity measures, respectively (Table 2).

There was only a significant positive correlation in the role limitation scores with respect to BMI in the group of patients with sacrospinous fixation. (r:0.451; p=0.014; p<0.05) (Table 3).

Discussions

LeFort colpocleisis and SSLF are vaginal procedures used for uterine prolapse or prolapse of the vaginal vault. LeFort colpocleisis is an obliterative procedure that restricts the sexual intercourse, being thus different by SSLF [9]. There is no study comparing the quality of life after these two procedures. Such a comparison would be necessary to evaluate the different aspects of the two procedures, because LeFort colpocleisis is obliterative while SSLF is reconstructive.

To our opinion, the quality of life can be a comparable item for these two procedures; the obliterative surgery should be further considered as a logical option in some circumstances and with an expanded informed consent. In this study, the age of the patients was significantly higher in patients who underwent LeFort colpocleisis compared with patients who benefited by SSLF. Although the age comparison was an expected item, the quality of life scores was not significantly different in the two groups. This may be attributed to changes that have taken place in the sexual intercourse, disappearance of dyspareunia leading to better quality of the life scores, while alterations the axe of the vagina in SSLF may lead to dyspareunia in some of the patients.

Obesity is a risk factor for the new onset and recurrent POP [11, 12]. In this study there was only a significant positive correlation in the role limitation scores with respect to BMI in patients from SSLF group; it seems that obliterative or reconstructive vaginal surgery are not affected from high BMI.

Table 1. The comparison of demographic variables

| | Surgery | | Total (n=51) | P value | |
|--------------------------|------------------------------|----------------------------|--------------|------------|----------------------|
| | Sacrospinous Fixation (n=29) | LeFort Colpocleisis (n=22) | | | |
| Age(years) | | 37-69 | 66-88 | 37-88 | ^a 0.001** |
| | Mean (SD) | 54.38 | 75.36 | 63.43 | |
| BMI (kg/m ²) | | 19.5-35.2 | 21.1-35.8 | 19.5-35.8 | ^a 0.094 |
| | Mean (SD) | 26.92 | 28.99 | 27.82 | |
| Education | Nonliteral | 10 (34.5%) | 10 (45.5%) | 20 (39.2%) | ^b 0.529 |
| | Literal | 15 (51.7%) | 8 (36.4%) | 23 (45.1%) | |
| | High School | 3 (10.3%) | 4 (18.2%) | 7 (13.7%) | |
| | University | 1 (3.4%) | 0 (0) | 1 (2.0%) | |

^aStudent t Test

^bFisher-Freeman-Halton Test

**p<0.01

Table 2. Comparison of PQOL scale subgroups in patients with sacrospinous fixation and LeFort colpocleisis

| P-QOL scale | | Surgery | | Total (n=51) | *P value |
|-----------------------------------|-----------|------------------------------|----------------------------|--------------|----------|
| | | Sacrospinous Fixation (n=29) | LeFort Colpocleisis (n=22) | | |
| General Health Perceptions Score | | 38.2-54.5 | 36.4-54.5 | 36.4-54.5 | 0.190 |
| | Mean (SD) | 43.6 | 43.39 | 43.6 | |
| Prolapse Impact Score | | 37.1-62.9 | 34.3-60 | 34.3-62.9 | 0.136 |
| | Mean (SD) | 44.04 | 42.47 | 43.36 | |
| Role Limitation Score | | 20-40 | 20-40 | 20-40 | 0.884 |
| | Mean (SD) | 23.79 | 23.18 | 23.53 | |
| Physical/Social Limitations Score | | 20-30 | 20-30 | 20-30 | 0.320 |
| | Mean (SD) | 22.76 | 21.59 | 22.25 | |
| Personal Relationship Score | | 33.3-46.7 | 33.3-46.7 | 33.3-46.7 | 0.337 |
| | Mean (SD) | 40 | 41.21 | 40.52 | |
| Emotional Score | | 20-26.7 | 20-26.7 | 20-26.7 | 0.544 |
| | Mean (SD) | 23.91 | 23.33 | 23.66 | |
| Sleep /Energy Score | | 20-30 | 20-30 | 20-30 | 0.302 |
| | Mean (SD) | 23.10 | 21.82 | 22.55 | |
| Severity Measures Score | | 20-30 | 20-25 | 20-30 | 0.781 |
| | Mean (SD) | 21.9 | 21.59 | 21.76 | |

*Mann Whitney U Test

Table 3. The correlation analysis between BMI and PQOL scale subgroups

| P-QOL Scale | | Surgery | | Total (n=51) |
|---|---|------------------------------|----------------------------|--------------|
| | | Sacrospinous Fixation (n=29) | LeFort Colpocleisis (n=22) | |
| General Health Perceptions Score-BMI | R | 0.289 | 0.331 | 0.057 |
| | p | 0.128 | 0.132 | 0.691 |
| Prolapse Impact Score- BMI | R | 0.109 | 0.025 | 0.062 |
| | p | 0.573 | 0.911 | 0.668 |
| Role Limitation Score – BMI | R | 0.451 | 0.187 | 0.173 |
| | p | 0.014* | 0.404 | 0.224 |
| Physical/Social Limitations Score - BMI | R | 0.131 | 0.176 | -0.015 |
| | p | 0.498 | 0.432 | 0.918 |
| Personal Relationship Score - BMI | R | 0.297 | 0.054 | 0.168 |
| | p | 0.118 | 0.812 | 0.238 |
| Emotional score - BMI | R | 0.126 | 0.351 | 0.07 |
| | p | 0.516 | 0.109 | 0.627 |
| Sleep /Energy - BMI | R | 0.267 | 0.167 | 0.17 |
| | p | 0.161 | 0.457 | 0.234 |
| Severity Measures Score – BMI | R | 0.069 | 0.223 | 0.127 |
| | p | 0.723 | 0.318 | 0.373 |

r: Spearman's Correlation coefficient *p<0.05

Sacrospinous fixation has the higher recurrence rates, up to 26% [7, 8, 13]. Most of the recurrences are at the anterior vaginal wall and postoperative infection seems to be the most important factor for the recurrence. The advantages of obliterative procedures are represented by

short operative time, low risk of perioperative morbidity, and lower rate of prolapse recurrence. Colpocleisis is offered as an option in elderly patients who do not desire sexual intercourse. In a similar way, this procedure can be extended to middle aged menopausal women who do not

desire sexual intercourse any more, or in patients who cannot be considered candidates for more extensive surgery (such as the sacrospinous fixation, that has a higher recurrence rates). Although we have compared only these two techniques, there are changes described in the literature. Thus, Bildircin et al. described two new surgical techniques, such as transapical circular sacrospinous colpopexy and cervical sacrospinous uteropexy [14]. There is no study in the literature that compares all these techniques, so that we consider that such a study should be conducted in the near future.

Limitations

The limitation of the study was represented by age of the patients that were significantly lower in patients who underwent SSLF. In fact, our study sample was relatively low, and there were patients from the LeFort category that were not included. Consequently, this reduced the population of the study. According to current data, our results could be the first report in literature comparing the two techniques, and this is the strengths of our study.

Conclusions

There was no significant difference at PQOL scores in all of the components. SSLF has a high recurrence rate and it is more difficult than the LeFort colpocleisis. The advantages of the LeFort colpocleisis are represented by short operative time and low risk of perioperative morbidity. Colpocleisis is offered as a therapeutic option especially in elderly patients who no longer desire sexual intercourse.

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