Quality of life and surgical satisfaction after vaginal reconstructive vs obliterative surgery for the treatment of advanced pelvic organ prolapse

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OBJECTIVE: We sought to compare quality of life and patient satisfaction after obliterative vs reconstructive surgery.

STUDY DESIGN: A retrospective cohort study of women who met the following inclusion criteria: age 65 years or older, leading edge of prolapse 4 cm or greater beyond the hymen, and vaginal reconstructive or obliterative surgery. Preoperative responses to the Urogenital Distress Inventory (UDI-6) and Incontinence Impact Questionnaire (IIQ-7) were collected retrospectively. We then mailed the same questionnaires, and the Surgical Satisfaction Questionnaire (SSQ-8), to these subjects postoperatively.

RESULTS: Mode of surgery was evenly split (n = 45 per group) between the 90 patients meeting the inclusion criteria. Improvements from the preoperative to postoperative Incontinence Impact Questionnaire and Urogenital Distress Inventory were comparable as were postoperative Surgical Satisfaction Questionnaire scores.

CONCLUSION: Improvements in condition-specific quality of life and postoperative patient satisfaction measures are comparable in women with prolapse who undergo either reconstructive or obliterative surgery.

Key words: pelvic organ prolapse, obliterative surgery, vaginal reconstructive surgery, mesh, quality of life

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Over $1 billion is spent on the surgical treatment of pelvic organ prolapse each year in the United States, with rates of complication exceeding 15%.[1] A common procedure performed for elderly women with severe prolapse is obliterative colpocleisis in the form of the LeFort procedure or total colpectomy. As women age, the risk of morbidity and mortality increase after urogynecologic surgery,[2] and although colpocleisis precludes future coital function, it is often used to minimize the risk of these untoward surgical outcomes while providing long-term relief of prolapse symptoms. Because the number of women older than the age of 60 years seeking care for pelvic floor disorders is expected to increase by at least 45% over the next few decades,[3] it is imperative that we understand the risks and benefits of the various approaches to the surgical correction of prolapse in our aging population.

Often, surgical success is measured by anatomic outcomes, complications, and recovery time; with less consideration given to how patients view its effect on their quality of life and overall satisfaction with the surgery. A recent review of the literature by Fitzgerald et al[4] on obliterative prolapse surgery shows that most investigations have been limited to case series assessing traditional measures of surgical success. However, some research shows that quality of life may be as important to patients as the status of their physical condition.[5] This has been reflected in the growing trend toward including validated quality-of-life instrument outcomes in surgical research protocols. To date, we know of 2 published studies[6,7] that use such instruments to measure outcomes after obliterative surgery, and only one of them compared these measures with patients undergoing reconstructive surgery.[7]

Of specific concern with colpocleisis is the risk of regret with the loss of coital function. A number of series have looked at regret after obliterative surgery.[6,8-11] But there are numerous reasons people may be unsatisfied with the outcome of their surgery and regret having it performed. No studies have compared satisfaction and regret after obliterative vs reconstructive surgery. The aim of the current study was to compare preoperative and postoperative quality-of-life measures and postoperative surgical satisfaction after obliterative and reconstructive vaginal surgery in an elderly cohort of women with severe pelvic organ prolapse.

Materials and Methods

This retrospective cohort study was initiated after obtaining Institutional Review Board (IRB) approval. The data-

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base of our practice's electronic medical record system was used to identify patients meeting the following inclusion criteria: leading edge of preoperative prolapse 4 cm or greater beyond the hymen, *status postvaginal* reconstructive or obliterative surgery between October 2004 and October 2006, and age 65 years or older at time of surgery. We chose to start our 2-year study period in October of 2004, because that is when we began to routinely ask our patients to fill out the Incontinence Impact Questionnaire (IIQ-7) and Urogenital Distress Inventory (UDI-6) before their first office visit. Obliterative surgeries included in the analysis included both the Lefort colpocleisis and total colpectomy both performed in the standard manner.[12] No high perineorrhaphy or levator plication was performed in either of these procedures. Vaginal reconstructive surgeries included any prolapse repair designed to restore support to the vagina and enable future coital function performed through a vaginal approach (all laparoscopic or open abdominal repairs were excluded). On the basis of our practice patterns, we anticipated that the majority of these repairs would have been performed with the use of anterior and/or posterior compartment bodies of polypropylene mesh anchored with straps passed percutaneously through the obturator and/or ischiorectal fossae. These procedures were performed by using the previously described transvaginal mesh technique[13] that used the Prolift system (Ethicon Women's Health and Urology, Johnson & Johnson, Somerville, NJ).

The decision to proceed with an obliterative vs a reconstructive surgery was made after extensive discussion between the surgeon and patient. The choice was made after discussing the various pros and cons of each approach and was in no way randomized. All patients who chose the obliterative approach were aware that future vaginal intercourse would not be possible. Patients who chose the reconstructive approach were not necessarily sexually active, nor did they all desire future sexual function.

A retrospective chart review was performed to collect the following data: responses to the preoperative short-forms of the IIQ-7 and UDI-6,[14] plus 2 additional prolapse-specific questions from the long-form of the UDI[15] ("How much are you bothered by. . . : 1. a feeling or bulging or protrusion in the vaginal area; and 2. bulging or protrusion you can see in the vaginal area?"), demographics, medical/social/surgical history, results of the preoperative Pelvic Organ Prolapse Quantification (POP-Q)[16] examination and urodynamic testing (if performed), surgical procedure(s) performed, perioperative outcomes, postoperative examination findings, further surgical interventions, and length of office follow-up.

All patients who met the inclusion criteria were then mailed a postoperative survey that contained a consent form, the IIQ-7, the extended UDI-6, and the Surgical Satisfaction Questionnaire (SSQ) (Appendix 1). Our research nurse attempted to contact by phone any patients who did not mail back the survey and obtain verbal consent to administer the questionnaires verbally. These data were then added to the study database.

The IIQ-7 and UDI-6 are validated condition-specific questionnaires that have been used extensively in the literature to compare preoperative and postoperative status of women undergoing pelvic reconstructive surgery.[6,17] The SSQ is an 8-item questionnaire, with responses recorded on a 5-point Likert-type scale with responses from 0 = "Very Unsatisfied" to 4 = "Very Satisfied." Scoring is similar to the IIQ-7 and UDI-6 with the mean average of the 8 scores being multiplied by 25 (the questionnaire is considered incomplete if more than 2 items are not answered), yielding a potential range of scores from 0 to 100. The higher the score is, the greater the degree of surgical satisfaction. Items 1 and 2 are used to calculate the Pain subscale; items 3, 4, and 5 are used for the Return to baseline subscale: and items 6, 7, and 8 are used for the Global satisfaction subscale. Each subscale is calculated in the same manner as the overall SSQ score. The SSQ is not designed to be condition-specific and has not yet been validated.

Univariate analysis comparing baseline and outcome data between the 2 surgical groups was conducted by using the Pearson χ^2 statistic for categorical data, the independent-samples t test for continuous data, and the paired samples t test for repeated measures. Statistical analysis was performed by using SPSS 15.0 for Windows (SPSS Inc, Chicago, IL).

We performed a power calculation to determine whether we had enough patients in our cohort to detect a 33.3-point difference (a change from "moderate" to "slight" bother) between groups in our primary dependent variable, change in UDI-Obstructive/Discomfort subscale score. Group sample sizes of 32 in each arm were required to achieve an 80% power to detect this difference between the obliterative and reconstructive groups with an α of .05 by using a 2-tailed test.

Results

Ninety patients met the inclusion criteria. By chance, the 2 surgical groups had the same number of patients (n = 45). Demographics, surgical history, and baseline quality-of-life measures were comparable between the 2 surgical arms with the following exceptions: mean age (80.0 vs 75.7 years, $P < .01$) and preoperative leading edge of prolapse (+7.0 vs +5.0 cm, $P < .01$) were greater in the obliterative group (Table 1). The percentage of group members undergoing concomitant minimally-invasive sling procedures was comparable (71.1% vs 73.3%, $P = .34$); this and other information on the procedures performed in each group can be found in Table 2. Although we did not design the study to compare vaginal reconstruction that used grafts to obliterative surgery, the only patients undergoing reconstructive surgery who met the inclusion criteria had undergone the Prolift procedure. No patients in either group underwent hysterectomy during their surgery.

Operative time was shorter in the reconstructive group, but perioperative outcomes were otherwise similar between groups (Table 3). Of the obliterative surgeries, the colpectomies on average took longer than the LeForts, but this difference did not meet statistical signif-