Published in final edited form as:

Int Urogynecol J. 2014 March ; 25(3): 347–350. doi:10.1007/s00192-013-2222-8.

Are patients' personal goals achieved after pelvic reconstructive surgery?

Anna L. Pilzek,

Division of Urogynecology Women and Infants Hospital, Alpert Medical School Brown University,
695 Eddy Street, Providence, RI 02903, USA

Christina A. Raker, and

Division of Research Women and Infants Hospital, Providence, RI, USA

Vivian W. Sung

Division of Urogynecology Women and Infants Hospital, Alpert Medical School Brown University,
695 Eddy Street, Providence, RI 02903, USA

Anna L. Pilzek: apilzek@wihri.org

Abstract

Introduction and hypothesis—Our goal was to describe patients' personal treatment goals before pelvic floor dysfunction (PFD) surgery and goals achieved and not achieved 12 months after surgery, and to evaluate the association between postoperative symptoms and successful goal achievement.

Materials and methods—We performed a secondary analysis using a de-identified database from a randomized trial comparing native tissue vs. graft-augmented rectocele repair. In their own words, women listed their top four treatment goals and 12 months after surgery whether those goals were or were not achieved. We categorized goals into symptom improvement (defecatory, bulge, incontinence, pain/discomfort) and functioning (physical, social, emotional, sexual). Women completed symptom questionnaires pre- and postoperatively. Goals were described using simple statistics. The association between defecatory, bulge, and incontinence symptoms and goal achievement was described using the chi-square test.

Results—Of 160 participants in the database, 125 (78 %) met inclusion criteria. The most common preoperative goals were improvement in bulge (26.7 %), defecation (23.9 %), urinary incontinence (18.1 %), and pain/discomfort (6.2 %). Functioning goal categories included: sexual (7 %), emotional (7 %), physical (6.2 %), and social function (3.3 %). Postoperatively, goal categories in which improvement was achieved were urinary continence (70.5 %), sexual function (58.8 %), bulge reduction (56.9 %), defecation (51.7 %), physical (33.3 %), emotional (29.4 %), and social functioning (25 %). Of the women reporting postoperative defecatory or incontinence symptoms, half reported successful improvement in both goals.

Conclusions—Women predominantly reported symptom-related goals, and those goals are most frequently achieved postoperatively. Of women who reported defecatory and incontinence symptoms postoperatively, many still reported successful goal achievement in those areas.

Keywords

Patient's goals; Pelvic organ prolapse; Surgical outcomes; Rectocele

Introduction

Pelvic floor disorders (PFD) are a significant cause of decreased quality of life (QOL). An estimated 200,000 women undergo prolapse surgery annually in the United States [1]. Historically, the success of these surgeries was defined objectively based on physician examination. In recent years, attention has focused on a woman's subjective improvement, satisfaction, and personal goal attainment as indicators of successful surgical treatment. Previous studies found that women with PFDs have a wide range of personal treatment goals [2, 3]. Achievement of these goals is a primary reason for undergoing surgery. In one study, patients' postoperative satisfaction with surgery was correlated with their goal achievement. Women whose personal goals were not met were often dissatisfied with their surgical outcomes, even though their surgery was considered "successful" based on objective findings [3]. The primary objective of this study was to describe patient-reported goals before surgical treatment for PFDs and whether goals were or were not achieved at 12 months after surgery. Secondly, we evaluated the association between postoperative pelvic floor symptoms and patients' perception of successful goal achievement.

Materials and methods

Institutional Review Board approval was waived, and we performed a secondary analysis of a de-identified database from a randomized controlled trial comparing graft-augmented and native tissue rectocele repair. The details of this trial have been previously published [4]. Briefly, women with stage 2 or greater symptomatic rectocele underwent rectocele repair. Many participants underwent additional repairs and/or incontinence procedures at that time. We therefore refer to these surgeries as PFD surgeries.

Once enrolled in the trial, during the preoperative visit, women filled out a self-administered symptom questionnaire regarding subjective symptoms of vaginal bulge, defecatory symptoms (constipation, splinting, and incomplete evacuation), and urinary incontinence. Relevant items from the Pelvic Floor Distress Inventory-20 (PFDI-20) were included. This questionnaire also asked participants to state their personal treatment goals for surgery. In their own words, women listed up to four goals in order of importance to the patient. Clinical information including Pelvic Organ Prolapse Quantification (POP-Q) findings and demographic characteristics were also recorded. The complete questionnaire is not included here, as only relevant items were extracted and used for this study. At the 12-month postoperative visit, women completed the same self-administered questionnaire and were asked to list treatment goals they felt were and were not achieved. They did not review their preoperatively stated goals prior to completing questionnaires. We came across a number of

preoperative goals that were not mentioned postoperatively as being achieved or not and named them “forgotten goals.”

We categorized patients’ goals into Symptomimprovement or Functioning. Symptom improvement goals were further divided into four categories: defecatory, bulge, urinary incontinence, and pain/discomfort. Functioning goals were also divided into four categories: physical, social, emotional, and sexual. Goals that did not fit into any of these categories were categorized as “Other.” One person was responsible for categorizing all goals by initially reviewing all goals then creating main categories. She then placed each goal into one of those categories.

Preoperative and 12-month postoperative goals (achieved, not achieved, and forgotten) are described using simple statistics. For our secondary objective, we analyzed the association between postoperative symptoms of bulge, defecatory dysfunction, and urinary incontinence. Postoperative goals were defined as affirmative responses to the corresponding PFDI- 20 items for bulge, defecatory symptoms, and urinary incontinence. The association between postoperative symptoms and goal achievement was described using the chi-square. SAS 8.2 was used for data analysis.

Results

Of the 160 women in the trial database, 125 (78 %) had complete preoperative and postoperative goal data and were included in this study. Mean patient age was 55 years $\pm$ 10.9 standard deviation (SD). The majority of women were Caucasian (91.9 %) and parous (94 %). Fifty-two percent had at least some college education, 70 % were postmenopausal, 33 % had a previous hysterectomy, and >50 % underwent a concomitant anti-incontinence procedure. Demographic data of the 35 women excluded from the trial were compared with participants, and there was no significant difference between groups. Patient demographic and clinical characteristics are summarized in Table 1.

Preoperatively, women collectively listed a total of 243 goals. The majority of goals was related to symptom improvement (74.9 %), with bulge improvement being most frequently listed as the primary goal (26.7 %). About a quarter of women (23.9 %) desired improvement in defecatory symptoms and 18.1 % desired improvement in urinary incontinence. Functioning goals were listed less frequently, contributing to 23.5 % of all preoperative goals. Sexual function improvement was listed most frequently in this category (58.8 %), followed by physical (33.3 %), emotional (29.4 %), and social function (25 %).

At 12 months postoperative, symptom improvement goals were achieved more frequently than functioning goals. Overall, the most frequently achieved goal was improvement in urinary incontinence (70.5 %). Bulge and defecatory improvement were achieved by more than half of women who listed these as preoperative goals (56.9 % and 51.7 %, respectively). In the category of functioning goals, improvement in sexual function was achieved by 58.8 % of women. Only about a third of women achieved their goal of social or physical function improvement. Very few goals were listed as not being achieved. Bulge improvement and defecatory improvement goals were each listed as not achieved by two

participants. There was one failure to achieve improvement in urinary incontinence and physical and sexual function. A relatively high number of goals were forgotten. Functioning goals were forgotten most frequently. For example, 33.3 % of women who had indicated a preoperative goal of physical function improvement reported having achieved this goal, 6.7 % listed it as not achieved, and 60 % of women forgot about this goal. Table 2 presents goals achieved, not achieved, and forgotten for each goal category.

The association between postoperative symptoms at 12 months and goals achieved is shown in Table 3. Of 41 women with persistent defecatory symptoms postoperatively, 46% still reported defecatory-function goal achievement. One participant complained of persistent bulge 12 months after surgery and listed that goal as not achieved. Four women complained of persistent urinary incontinence, half of whom reported achieving and half as not achieving their incontinence goals.

Discussion

Our study describes patients' personal goals prior to undergoing PFD surgery. Our patients had a wide range of personal goals they hoped to accomplish after surgery. The majority of goals involved improvement of bothersome symptoms. Symptom goals were commonly achieved, whereas functioning goals, including physical and social function, were achieved less frequently. We also found that even though women may report persistent defecatory or urinary incontinence symptoms postoperatively, half of those women reported achieving their goals in corresponding categories.

Saskin et al. [5], in their paper on mechanisms of continence and surgical cure, suggested that using an individual patient goal-driven approach in evaluating success of incontinence surgery may be more clinically meaningful than the currently used QOL measures. They noted a lack of data regarding patients' expectations before surgery, as well as new evidence that patient satisfaction does not often correlate with objective outcomes. This can be extrapolated to a variety of other PFD surgeries, which are most often performed to improve QOL. Our study fills in the information gap by providing information regarding patients' personal goals prior to PFD surgery and the proportion of those goals achieved 12 months after surgery. This study was not designed to assess patients' satisfaction postoperatively, but according to Elkadry et al. [3], there is a moderate correlation between patient goal achievement and satisfaction with surgery. Higher frequencies of symptom goal achievement after rectocele repair may equal higher postoperative satisfaction, but this remains to be determined.

Another interesting finding of our study is the association between postoperative symptoms and goal achievement. All participants had a vaginal bulge and/or defecatory dysfunction, and many had urinary incontinence. Half of the women with persistent defecatory symptoms and urinary incontinence considered their goals of improvement in those areas to be achieved, suggesting that even a partial improvement in bothersome symptoms maybe be enough to attain goal achievement.

During goal analysis we came across a large number of forgotten goals. Many goals were listed at preoperative visits, but it seems that women forgot about them postoperatively. The reason is unclear. It is possible that 12 months after surgery, women may have adapted to the resolution of their symptoms and thus may have forgotten about their limitations prior to surgery. Functioning goals were forgotten more frequently than symptom goals and were also achieved less frequently, suggesting that the lower achievement may have been due to women forgetting about these goals rather than not achieving them.

The relationship between patient-reported symptoms and objective findings is not straightforward. A study by Adams et al. showed that 42 % of women with stage III vaginal prolapse did not list relief in prolapse symptoms as their preoperative goal. In another study, 17 % of women with stage 0 prolapse after surgery still complained of symptoms of bulge postoperatively [6]. Because of the complex nature of the relationship between goals and anatomic findings, we did not compare patients' perception of goal achievement with objective results. In addition, we had no objective data on postoperative urinary incontinence or bowel symptoms other than patients' reports/questionnaires. Our study design limited our ability to do such comparisons.

These results emphasize the need for a better understanding of the relationship between patients' symptoms, their treatment goals, and what the definition of a "successful" surgery is. Most likely, this definition will be different for each patient depending on her values and preferences.

This study is limited by its design. By performing a secondary analysis of an existing database, we only had access to information contained therein. The original study was designed to compare surgical outcomes in graft vs. nongraft rectocele repair, but most participants had defects in other compartments as well, and also had urinary incontinence. Detailed POP-Q information for rectocele was not included because we believe that the degree of bother by POP is related to the overall stage of prolapse and not a specific stage for each compartment. We recognize that using heterogeneous data such as ours is a limitation, but in real life, these are patients we see most commonly in our office. We were only able to study the association between goal achievement and postoperative symptoms for three symptom goals. It would be interesting to perform similar analysis in all goal categories. This may give us a better understanding of how women decide whether their goals are achieved or not. Further investigation of why women may forget their preoperative goals is also warranted. The strengths of our study include the fact that it was a prospective trial with good follow-up data. We did not remind patients what they listed as their preoperative goals, as this may have biased their responses postoperatively. Therefore, we were also able to assess which goals were forgotten, thus emphasizing that adaptation may play a significant role in these conditions.

In conclusion, women with PFDs have symptom improvement and functioning goals, which are frequently achieved after surgical treatment. Symptom improvement goals are more frequently achieved than functioning goals, which is most likely because multiple factors contribute to a patient's physical, social, and sexual functioning. Patients need not

experience complete resolution of symptoms in order to report achievement of symptom goals.

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Table 1

Demographics

Variable	Number (%)
Age, mean (SD); range	55.3 (10.9); 33–84
<50	44 (35.2)
50–59	35 (28.0)
60–69	31 (24.8)
70+	15 (12.0)
Race/ethnicity (<i>N</i> =124)	
Caucasian, non-Hispanic	114 (91.9)
Non-Caucasian or Hispanic	10 (8.1)
Parity, median (range)	2 (0–7)
Postmenopausal	
No	37 (29.6)
Yes	88 (70.4)
Education (<i>N</i> =116)	
12th grade or less	9 (7.8)
High school	47 (40.5)
College and above	60 (51.7)
POP-Q stage	
II	89 (71.2)
III	34 (27.2)
IV	2 (1.6)
Urinary incontinence (<i>N</i> =115)	
None	21 (18.3)
Stress	52 (45.2)
Urge	20 (17.4)
Mixed	22 (19.1)
Concomitant procedure	
Vaginal hysterectomy	15 (12.0)
Anterior colporrhaphy	41 (32.8)
McCall's	7 (5.6)
Sacrospinous ligament fixation	7 (5.6)
Midurethral sling	66 (52.8)

*N*125 unless otherwise listed

SD standard deviation, *POP-Q* Pelvic Organ Prolapse Quantification system

Table 2

Preoperative goals, and goals reported as achieved, not achieved, and forgotten at 12 months after surgery for pelvic floor disorders

	Total N=243 (%)	Achieved	Not achieved	Forgotten^a
Symptoms goals	182 (75)	105 (58)	5 (3)	72 (39)
Defecatory	58 (24)	30 (52)	2 (3)	26 (45)
Bulge	65 (27)	37 (57)	2 (3)	26 (40.0)
Incontinence	44 (18)	31 (70)	1 (2)	12 (28)
Pain or discomfort	15 (6)	7 (47)	0	8 (33)
Functional goals	57 (24)	22 (39)	2 (3)	33 (58)
Physical	15 (7)	5 (33)	1 (7)	9 (60)
Social	8(3)	2(25)	0	6(75)
Emotional	17 (7)	5 (29)	0	12 (71)
Sexual	17 (7)	10 (59)	1 (6)	6 (35)
Other	4 (1)	1 (25)	0	3 (75)

^a Goals forgotten are those mentioned preoperatively but not mentioned as achieved or not achieved postoperatively

Table 3

Association between postoperative symptoms and goal achievement 12 months postoperatively

Persistent symptoms	Achieved <i>N</i> (%)	Not achieved <i>N</i> (%)	Forgotten <i>N</i> (%)
Defecatory ^a <i>N</i> =41	19 (46)	2 (5)	20 (49)
Bulge <i>N</i> =1	0	1 (100)	0
Urinary incontinence <i>N</i> =2	2 (50.0)	0	2 (50)

^a Constipation, splinting, incomplete emptying, trapped stool, and incontinence of stool/gas