

Patient Reported and Anatomical Outcomes After Surgery for Pelvic Organ Prolapse

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Aim: Primary aim was to modify Pelvic Floor Distress Inventory (PFDI) and Pelvic Floor Impact Questionnaire (PFIQ) to assess pelvic organ prolapse (POP) in Arabic Muslim women. Secondary aim was to compare functional and anatomical outcomes of POP repair. **Methods:** Questionnaire. A characteristic (prayer) was added to PFIQ. Linguistic validation of questionnaires was then done. Twenty cases were enrolled in a pilot study to test internal consistency and reliability. Subsequent study. Prospective study included women with symptomatic POP \geq stage II. History, examination by POP-Q, and administration of PFDI and PFIQ, were done before and 6 months after surgery. **Results:** Questionnaire. Internal consistency of added question was good (Cronbach $\alpha = 0.78$). Test–retest reliability of individual PFIQ items was variable. Subsequent Study. Between September 2004 and February 2007, 78 consecutive women were included. Cystocele, rectocele, and no site predominated in 74.4%, 17.9% and 7.7% of cases, respectively. Preoperatively 19.2%, 15.4% and 47.4% reported stress, urge, and mixed incontinence, respectively. Overall and individual urinary symptoms scores improved significantly after surgery. There were significant improvements in individual symptoms of constipation, splint to defecate and losing not well formed stools. Low self-esteem was most negative impact of prolapse on quality of life (QoL) followed by prayer. After surgery 90% of subjects had anatomical cure. After surgery, QoL issues are significantly related to anatomic location of prolapse as determined by POP-Q. **Conclusions:** Modified PFIQ and PFDI are suitable to assess POP among Muslim women. Postoperatively, many prolapse-related symptoms and QoL significantly improve after surgery on the short term with an anatomic cure rate of 90%. *Neurorol. Urodynam.* 28:219–224, 2009.

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Key words: defecatory disorders; incontinence; pelvic organ prolapse; prayer; quality of life; urine loss; women

INTRODUCTION

Symptoms experienced by women with pelvic organ prolapse (POP) may be classified as bulge, urinary, bowel, anorectal, sexual, and pain. The most common urinary symptoms experienced by women are frequency, urgency, urinary incontinence, and voiding difficulties. These symptoms may be independent concomitant problems or may be due to cystocele itself.¹ Women with posterior vaginal wall prolapse frequently report symptoms related to bowel dysfunction, such as constipation, requiring digital pressure to assist defecation, fecal urgency, and incontinence of flatus or stool.² Urinary and bowel symptoms can lead to decreased physical and psychological well-being to creating social problems.

In Muslim women, urinary or fecal incontinence strongly interfere with the ritual purity prescribed for the daily prayers.³ Muslims have to perform ablutions after urine, flatus or fecal loss prior to each of the five daily prayer sessions. Incontinent women need to wash many times a day which is a heavy burden. Van den Muijsenbergh and Lagro-Janssen⁴ have pointed out to the negative impact and heavy burden of washing many times a day to pray in a study of Moroccan and Turkish migrant women with urinary incontinence. Many women with incontinence have to stop praying completely if incontinence occurs during praying. These religious restrictions as a result of urine, gas or fecal loss in Muslim women have a profound effect on their quality of life (QoL).

Both the Pelvic Floor Distress Inventory (PFDI-20) and Pelvic Floor Impact Questionnaire (PFIQ-7), the only valid condition-specific questionnaires that assesses presence of symptoms and QoL in POP, have three scales: urinary, colorectal, and prolapse scales.⁵ PFIQ covers four domains: physical activity, social relationships, travel, and health, thereby ignoring prayer. The PFIQ in its current form is insufficient to assess the QoL of Muslim women. Additionally, a questionnaire that is valid and reliable for a particular language may not prove so when used in a different population. Linguistic validation of the questionnaire is an important process that should be implemented before the questionnaire is in use in clinical and research practice in a population with different language.

The primary objective of this study was to modify the PFIQ and to introduce it with PFDI-short form into clinical and research practice to assess POP among Arabic Muslim women. We linguistically validated and then administered the two questionnaires to a group of Arabic Muslim women suffering from symptomatic POP who are going to have pelvic floor reconstructive surgery. The secondary objective was subsequently to

No conflict of interest reported by the author(s).

Heinz Koebel led the review process.

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Received 19 January 2008; Accepted 2 June 2008

Published online 22 August 2008 in Wiley InterScience

(www.interscience.wiley.com)

DOI 10.1002/nau.20626

assess the short-term functional and anatomical outcomes of surgical repair in a group of Muslim women with symptomatic POP. We correlated the anatomic stage of prolapse as determined by POP-Q points with QoL domains as determined by standardized questionnaires.

MATERIALS AND METHODS

Questionnaire

The study was approved by the local ethical committee, Faculty of Medicine, Assiut University. We added a new characteristic prayer, which the PFIQ-7 does not assess. We created a single question inquiring about the impact of prolapse on prayer and added this question to the urinary and bowel scales of the PFIQ short form [Incontinence Impact Questionnaire (IIQ-8), Colo-anal Rectal Impact Questionnaire (CARIQ-8) and Pelvic Organ Prolapse Impact Questionnaire (POPIQ-7)]. After generating this potential item, linguistic validation of the two questionnaires was done. The linguistic validation passed through three steps.⁶ First: forward translation that consisted of translation of the questionnaire from the original language into the target language to produce a conceptually equivalent translation of the original questionnaire with a language easy to understand. Two local professional English-Arabic translators, native target language speakers, bilingual in source language, worked independently to produce two forward translation of the original items and instructions and response choices in Arabic language (Version 1). Second: the backward translation consists of translation of the first version of the questionnaire back into the source language. Another translator (bilingual in target language) who did not have access to the original version of the questionnaire translated the first version of the questionnaire back to English. Comparison of the backward version with the original source version was done. This resulted in changes to the first version, giving rise to the second version. Finally, pretesting of the final drafts of the two questionnaires was done. The potential items of the questionnaires were administered by means of in-person interview with 20 women with symptomatic POP (who had not participated in the subsequent study). The aim was to evaluate individual item performance (internal consistency) and test-retest reliability of the two questionnaires. During the interview, women were inquired if they had any difficulty in understanding any item in the questionnaires; which is then corrected producing the final Arabic version. Women were then asked to come back to the clinic after 2 weeks to complete the two questionnaires. Individual items were evaluated by examination of patterns of response options and missing or not interpretable responses. Internal consistency among sets of items was evaluated with item-total correlations and the Cronbach's α coefficient. Test-retest reliability was evaluated with weighted κ statistics. Items that did not meet the criteria were revised to produce the final version of the questionnaires that was used in the main study.

Subsequent Study

All women with symptomatic prolapse POPQ stage two or greater undergoing surgical correction was recruited prospectively from the outpatient department of the Female Urology unit, Urology Department. Women with neuropathic deficit were excluded from the study. Baseline patient evaluation included history; physical examination including cough stress test, focused neurological exam, rectal examination as well as

anatomical assessment of prolapse using the POP quantification system (POP-Q).⁷ Urine analysis and culture and post-void residual volume assessment by ultrasound were done for all patients. Women's perception of their symptoms and QoL were assessed by asking the patient to complete two questionnaires before the operation: PFDI and modified Arabic PFIQ (PFIQ-7 + 1) –short forms. Women then underwent surgery. With significant uterine descent, vaginal hysterectomy was performed. Cystocele and/or rectocele repair was done without use of synthetic mesh.⁸ Concomitant anti-incontinence procedure was performed when indicated. Six months after surgery, patients were scheduled for follow-up visits, in which, history, pelvic examination, and post-void residual volume were recorded. In addition, changes in the patients' symptoms, their QoL and treatment outcome were repeated in these visits by re-administering the PFDI and PFIQ-7 + 1.

The primary outcome measure was the changes in the PFDI and PFIQ scores after surgery. In addition, the prevalence of urinary, bowel and prolapse symptoms (based on responses to specific questions in the PFDI-20) before surgery were compared with those after surgery. The secondary endpoint was to correlate QoL changes with anatomical success, defined as points Bp and Aa ≤ -2 at the 6-month postoperative visit.⁹

Statistical Analysis

Analysis of differences in the PFDI and PFIQ scale scores (Continuous variables) was performed using paired *t*-test or Wilcoxon signed rank test as appropriate. Paired proportional data (proportion of patients having the condition before and after surgery) were compared with the use of the McNemar's chi-square test. SPSS software version 15.0 was used for the data analysis. Probability values of <0.05 were considered statistically significant.

TABLE I. Preoperative and Demographic Criteria of Study Subjects

Age in years (mean, \pm SD)	42 (\pm 8)
Parity (median, range)	5 (2–10)
Abortion (median, range)	1 (0–7)
Menopausal status	
Premenopausal	28 (72%)
Postmenopausal	11 (28%)
Leading prolapse edge staging by POP-Q	
Stage II	41 (52.5%)
Stage III	31 (39.6%)
Stage IV	6 (7.9%)
Individual anatomic compartment by POP-Q	
Cystocele	78 (100%)
Stage I	11 (14.1%)
Stage II	38 (48.7%)
Stage III	25 (32.1%)
Stage IV	4 (5.1%)
Rectocele	78 (100%)
Stage I	38 (48.7%)
Stage II	28 (35.9%)
Stage III	8 (10.3%)
Stage IV	4 (5.1%)
Anatomic site predominance by POP-Q (cm)	
Cystocele predominance	58 (74.4%)
Rectocele predominance	14 (17.9%)
No site predominance	6 (7.7%)
POP measurement in cm (mean \pm SD)	
GH	4.69 \pm 1.04
PB	3.89 \pm 1.28
C	-5.05 \pm 3.34
Aa	1.1 \pm 2.2
Bp	-0.2 \pm 2.3
TVL	7.6 \pm 0.92

RESULTS

Questionnaire

Twenty women were enrolled in the pilot study. The 4-point response scale of question inquiring about impact on prayer (Q1) is described as follow: 0, not at all; 1, makes me to repeat the ritual cleansing for each prayer; 2, makes me to repeat the prayer; 3, almost makes me to stop praying. The number of missing or not interpretable responses per item of the PFIQ ranged from 1.8% to 6.9%. Internal consistency of item inquiring about prayer was good (Cronbach's $\alpha = 0.78$).

Test-retest reliability of individual PFIQ items was variable, with weighted κ statistics from 0.35 to 0.90 (median, 0.69; $P = 0.000$).

Subsequent Study

Between September 2004 and March 2007, 78 consecutive women with symptomatic POP were enrolled in the study. Preoperative criteria of the study subjects are presented in Table I. At the baseline, the mean POP-Q point Bp was -0.2 and point Aa was +1.1 (Table I). Associated uterine descent was

TABLE II. The PFDI-20 and PFIQ-7 Before and 6 Months After Surgery

	Baseline	Postoperative	P-value
PFDI-20			
UDI-6	59.6 ± 15.9	33.2 ± 8.9	0.000
Frequency	8.8 ± 4.2	5.7 ± 2.7	0.000
Urge incontinence	10.5 ± 5.1	5.6 ± 3.1	0.000
SUI	13.2 ± 4.3	4.7 ± 2.2	0.000
Drops	11.2 ± 4.4	4.7 ± 2	0.000
Difficulty	6.1 ± 3.5	4.7 ± 2	0.002
Pain	9.7 ± 3.3	7.7 ± 3.3	0.000
CARDI-8	45.0 ± 16.3	36.4 ± 12.1	0.000
Constipation	10.2 ± 4.7	6.4 ± 3.6	0.000
Incomplete evacuation	8.7 ± 4	6.6 ± 2.8	0.000
Lose well formed stools	5 ± 2.4	4.5 ± 1.3	0.086
Lose not well formed stools	6 ± 3.2	4.8 ± 2	0.003
Lose gases	7.9 ± 3.3	7.4 ± 2.8	0.221
Painful defecation	7.1 ± 3.8	6.8 ± 3.9	0.386
Urgency			
Rectal prolapse			
POPDI-6	53.6 ± 14.2	37.6 ± 12.1	0.000
Pressure, lower abdomen	11.9 ± 4.1	9.5 ± 3.5	0.000
Heaviness, vagina	10.7 ± 3.6	6.3 ± 3.6	0.000
Something protruding	10.7 ± 3.2	6.3 ± 3.6	0.000
Splint to defecate	8.7 ± 4.5	5.6 ± 3.5	0.000
Sense of incomplete bladder evacuation	6.4 ± 3.4	5 ± 2	0.005
Splint to void	5.3 ± 2.8	5 ± 2	0.477
PFIQ-7			
IIQ-8	76.2 ± 18.6	50.1 ± 15	0.000
Prayer	7 ± 3.7	5.3 ± 1.9	0.001
household chores	9.3 ± 4.8	8.1 ± 4.7	0.062
Physical activities	9.6 ± 4	5.4 ± 2.1	0.000
Entertainment	4.9 ± 2.9	4.5 ± 1.4	0.231
Travel	6.8 ± 3.9	5.3 ± 1.9	0.013
Social activities	9.9 ± 4.4	6.4 ± 2.7	0.000
Emotional health	14.2 ± 3	7.5 ± 4	0.000
Low Self-esteem	14.2 ± 3.3	7.7 ± 4.1	0.000
CARIQ-8	69.5 ± 18.2	54.1 ± 13	0.000
Prayer	7 ± 3.6	5.5 ± 2.3	0.005
Household chores	7 ± 3.6	6.2 ± 2.4	0.174
Physical activities	9.8 ± 2.9	8.5 ± 2	0.042
Entertainment	4.7 ± 1.5	4.5 ± 2	0.416
Travel	4.9 ± 1.6	4.6 ± 2.1	0.592
Social activities	9.7 ± 4.2	8.3 ± 3	0.076
Emotional health	9.8 ± 4.1	8.4 ± 2.8	0.032
Low Self-esteem	14 ± 3.1	8 ± 4.3	0.000
POPIQ-7	67.5 ± 19.3	55.3 ± 13.8	0.000
Household chores	7.1 ± 3.4	5.6 ± 2	0.003
Physical activities	9.5 ± 4.3	8 ± 3.2	0.062
Entertainment	4.5 ± 1.6	4.3 ± 1.7	0.035
Travel	4.6 ± 1.4	4.3 ± 1.9	0.162
Social activities	6.6 ± 3.9	5.1 ± 1.7	0.016
Emotional health	9.6 ± 3.8	6.1 ± 2.6	0.000
Low Self-esteem	13.7 ± 3.1	6.5 ± 3.9	0.000

The mean and SD of the PFDI-20 and PFIQ-7 before and after the operation. The PFDI-20 has a range of 0–300 with higher scores indicating greater distress. It has three subscales: each of which has a range of 0–100. The PFIQ-7 has a range of 0–300 with higher scores indicating greater adverse impact on QoL. It has three subscales: each of which has a range of 0–100.

found in 21 subjects (26.9%): 24.3% (19/78) had stage I and 2.5% (2/78) had stage IV while associated stage I enterocele was found in three cases. Preoperatively, 64 women (82%) reported urinary incontinence; of those 19.2% reported stress, 15.4% reported urge, and 47.4% reported mixed incontinence; while 33% of women experienced difficulty emptying their bladders. Defecatory dysfunction was also commonly expressed with 74% of women reported constipation. Symptoms suggestive of pelvic floor herniation commonly included sensation of lower abdominal pressure (87%), pelvic or vaginal heaviness (82%), visualization or sensing of a bulge or protrusion in vaginal area (85%), need to manually splint vagina to assist defecation (56%) and to assist voiding (23%). Preoperatively, similar negative impact on prayer was noted for urinary and fecal incontinence. Low self-esteem was the most negative impact of prolapse on QoL of those women, while entertainment activities and travel were the least to be affected (Table II).

Cystocele repair was done in 29 cases (37%); cystocele repair in 38 cases (49%), while rectocele repair in 11 cases (14%). Concomitant anti-incontinence procedures were performed in 60 patients (51 with symptom of SUI and nine women with urodynamic diagnosis of SUI). There were significant improvements in urinary, colorectal, and prolapse scales of the PFDI and the PFIQ after surgery (Table II) indicating decreased bother and improved health-related QoL. The highest improvement in QoL after surgery was increase in woman's self-esteem followed by prayer (Table III). The prevalence of each urinary, bowel, and prolapse symptom preoperatively and 6 months after surgery can be seen in Table IV. All urinary symptoms were significantly improved 6 months after surgery. Postoperative storage symptoms were found in 17 subjects (22%), these were persistent in 12 (15.4%) and De novo symptoms in 5 cases (6.6%). Out of those 17 patients with postoperative storage symptoms, urethral obstruction was urodynamically demonstrated in four patients. New onset constipation developed in eight patients (10.3%), which occurred mainly in women with recurrent or development of higher stage rectocele after surgery.

TABLE III. Correlation of Anatomical Prolapse Stage With QoL as Determined by PFIQ

	Correlation coefficient (r)	
	Before surgery	After surgery
IIQ-8	0.46	
Prayer		0.495
Household chores		
Physical activities		
Entertainment		
Travel		
Social activities		
emotional health	0.31	0.299
Low Self-esteem	0.26	
CARIQ-8		0.741
Prayer	0.23	0.637
Household chores		0.362
Physical activities		0.621
Entertainment		0.276
Travel		
Social activities		
Emotional Health	0.16	0.600
Low Self-esteem	0.34	0.681
POPIQ-7	0.46	0.359
household chores	0.43	
Physical activities		
Entertainment		
Travel		
Social activities		0.345
Emotional Health		0.333
Low Self-esteem	0.38	0.346

Correlation between QoL with worsening prolapse with respect to location (using POP-Q points Aa and Ap) using Spearman's Correlation coefficient. Only positive correlations are shown in the table.

Figures 1 and 2 demonstrate the correlations between points Aa and Pa and the QoL before and after surgery. The QoL scores were analyzed with respect to stage of prolapse (anterior (point Aa) and posterior (point Ap) with the use of

TABLE IV. The Prevalence of Urinary, Coloanalrectal, and Prolapse Symptoms (According to PFDI) Among our Study Subjects Before and After Operation

	Baseline (n) (%)	Postoperative (n) (%)	P-value
UDI-6			
Frequency	52 (66.7%)	16 (20.5%)	0.000
Urge incontinence	50 (64.1%)	11 (14.1%)	0.000
SUI	51 (65.4%)	7 (8.9%)	0.000
Unconscious urine drops	58 (74.4%)	6 (7.7%)	0.000
Difficulty	26 (33.3%)	10 (12.8%)	0.007
Pain	68 (87.2%)	48 (61.5%)	0.000
CARDI-8			
Constipation	58 (74.4%)	26 (33.3%)	0.000
Sense of incomplete bowel evacuation	52 (66.7%)	40 (51.3%)	0.065
Lose well formed stools	16 (20.5%)	10 (12.8%)	0.238
Lose not well formed stools	24 (30.8%)	12 (15.4%)	0.023
Lose gases	54 (69.2%)	52 (66.7%)	0.832
Painful defecation	36 (46.2%)	32 (41%)	0.454
Fecal urgency	8 (10.3%)	6 (7.7%)	0.332
Rectal prolapse	2 (2.6%)	1 (1.3%)	0.621
POPDI-6			
Pressure, pain in lower abdomen	68/78 (87.2%)	63 (70.7%)	0.843
Heaviness, vagina	64/78 (82.1%)	26/78 (33.3%)	0.000
Something protruding from vaginal	66/78 (84.6%)	22/78 (28.2%)	0.000
Splint to defecate	44/78 (56.4%)	16/78 (20.5%)	0.000
Sense of Incomplete bladder evacuation	28/78 (35.9%)	18/78 (23.1%)	0.143
Splint to void	18/78 (23.1%)	16/78 (20.5%)	0.864

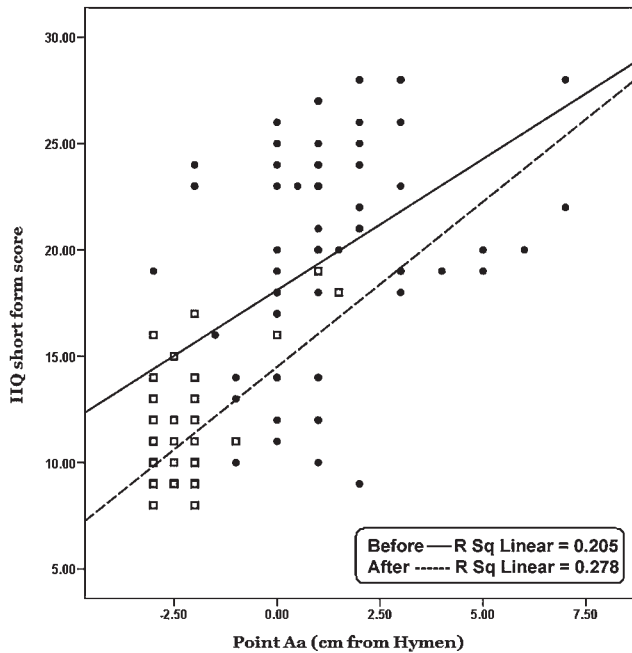


Fig. 1. Scatter plot curve of point Aa and the modified IIQ-short form before and after surgery.

the nonparametric correlation coefficient, Spearman's ρ (Table III). Before surgery, there is statistically significant positive correlation between cystocele stage (point Aa) and the impaired urinary QoL (IIQ) ($r = 0.46, P = 0.000$). After surgery, there is weak correlation between QoL with worsening cystocele with respect to location (point Aa) that is marginally significant ($r = 0.23, P = 0.04$). Prayer was the

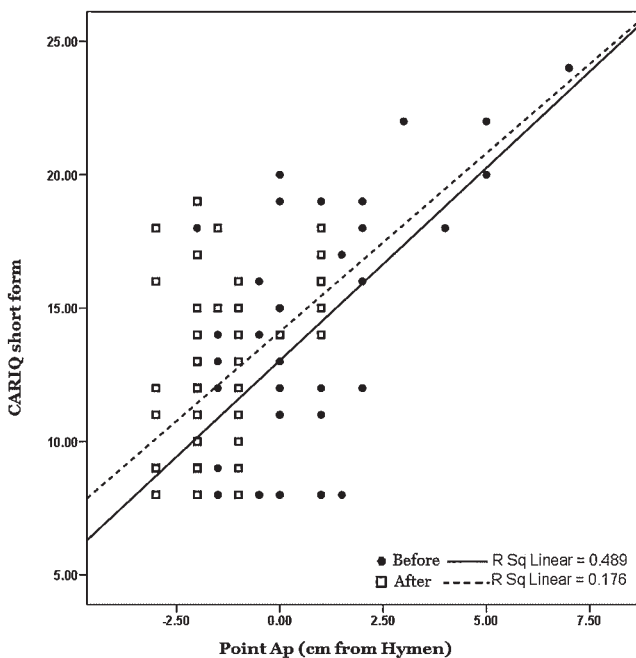


Fig. 2. Scatter plot curve of point Ap and the modified CARIQ short form before and after surgery.

strongest QoL domain that showed significant improvement after surgery. As regard the bowel, there was positive statistically significant correlation between worsening rectocele (point Ap) and the impact of bowel symptoms on the QoL (CARIQ) both before ($r = 0.533$) and after surgery ($r = 0.385$).

After surgery, 89.7% of our study subjects ($n = 70$) had an anatomical cure, while 10.3% ($n = 8$) had anatomical failure. Three women (with previous cystocele repair) had recurrent cystocele and rectocele. They were scheduled for redo operation to correct cystocele and rectocele. Another five patients developed higher stage rectocele after a procedure involving cystocele repair. Those five patients had Stage I rectocele that was not repaired at time of cystocele repair. They returned with worsening (higher stage) rectocele (two patients with Stage II and three with stage III) and worsening constipation that did not improve by conservative management. They underwent anorectal manometry and they were scheduled for to correct rectocele.

DISCUSSION

Success after surgery for POP is complex and should be evaluated in multiple domains, including anatomical and functional outcomes. In our study, these outcomes have been measured in a standardized prospective reproducible way, including anatomical assessment through POP-Q, and symptoms and QoL assessment through validated questionnaires that were modified to adapt Muslim culture. The main finding of our study is the utility of the new domain. PFIQ was modified by adding a question to inquire about prayer (PFIQ-7 + 1). Thus adaptation of the PFIQ went beyond linguistic validation and included cultural adaptation. Limitations of this study are short follow-up and that we did not assess sexual function. Disturbance of prayer schedule due to passage of urine, feces or flatus can severely impair QoL of Muslim and clearly points to cultural differences.¹⁰ Urinary and/or fecal incontinence interfere with a Moslem woman's daily activities with respect to her prayer and is a source of frustration.¹¹ Among the issues that emerged and were addressed during adaptation of the questionnaire was that the four-point response scale of the question inquiring about prayer (Q1) was changed from the classic description (0, not at all; 1, less than half the time; 2, more than half the time; 3, almost always) to new description: 0, not at all; 1, makes me to repeat the ritual cleansing for each prayer; 2, makes me to repeat the prayer; 3, almost makes me to stop praying. Most patients did not understand the response in classic description (they did not understand how prayer was mildly or moderately affected by incontinence) and it was necessary to classify the response. The response in the new description was made to be clear and specific to quantify the exact impact of UI on prayer. The questionnaire is available in both Arabic and English upon request.

Doctors providing health care service for Muslim women should understand these religious restrictions. Miscommunication at doctor's visit may lead to inadequate care. To improve QoL of these women, religious issues as disturbance of prayer schedule should be discussed during preoperative counseling of those women. While the evidence in the literature is scarce, there are few studies showing similar impacts on QoL in Jewish women.¹²

Vaginal reconstructive surgery effectively reduces many prolapse-related symptoms and improves QoL.² In our study, all urinary symptoms have significantly improved after surgery in women who reported these symptoms preoperatively. In addition to the improvement in the symptoms, the

main finding of our study is that there is good correlation between anatomy (stage of prolapse) and the symptoms as well as the QoL. Many QoL issues are significantly correlated with the anatomic stage of prolapse. There is good evidence suggesting that rectocele repair improves bowel symptoms.¹³ In our study, constipation, losing not well formed stools, and splint to defecate have significantly improved after rectocele repair in women who report these symptoms preoperatively. Improvement in overall and individual urinary symptoms was better than bowel symptoms and patients should be counseled preoperatively about that issue. Low self-esteem was the most negative impact of urinary, bowel and prolapse symptoms on QoL of those women with POP, while entertainment activities and travel were least to be affected; because in Egyptian culture, entertainment activities and travel are not important issues for women there. In addition, improvement in QoL after rectocele repair was mostly noted in woman's self-esteem followed by prayer. This is because gas incontinence (second most common bowel symptoms) interferes with ritual cleaning; thus women find themselves having to wash many times a day impacting on all aspects of life, but most importantly on their self-esteem through prayer.

Despite the frequent coexistence of POP and urinary, bowel and prolapse symptoms, a relationship between them has been a matter of debate. Ellerkmann et al.,¹⁴ in a study of 230 consecutive women with symptomatic POP, found weak to moderate correlations between urinary symptoms (urinary incontinence and voiding dysfunction symptoms) and worsening cystocele. They also found weak correlation between the symptoms of sensation of incomplete defecation and the need to splint vagina to facilitate defecation and worsening apical and posterior compartment prolapse. Our study is the first one that investigated the association between the severity of prolapse and the QoL as determined by a standardized questionnaire. We found moderate correlation between the overall IIQ at the baseline and the degree of cystocele ($r = 0.46$, $P = 0.000$). After surgery, we found weak marginally significant correlation between the anatomic stage of cystocele and the overall IIQ ($r = 0.23$, $P = 0.07$). The strongest QoL domain that was positively correlated with anatomical failure was prayer subscale of the IIQ ($r = 0.495$). As regard bowel domain of QoL, there was weak correlation between the anatomic stage of rectocele before surgery and the overall CARIQ, the prayer, emotional and low self-esteem subscales. After surgery, these correlations turn into stronger, and more subscales of the CARIQ (household, physical activities and entertainment) were variably positively correlated to rectocele stage (AP) (Table III). These findings show that QoL is improved with reduction of prolapse grade by surgery. Successful surgery leads to a better improvement of QoL while cases associated with anatomical failure are associated with worse QoL.

Anatomic cure rate in our study on short term is 90%. Out of the eight recurrent cases in our study, five cases (6.4%) had mild rectocele that was not repaired at time cystocele repair. After a variable postoperative time, they returned with higher stage rectocele and new onset defecatory symptoms mainly constipation. Our study may suggest that concomitant compartment defect should be repaired even mild on constructing another compartment.

CONCLUSIONS

PFDI and modified PFIQ are suitable to assess symptoms and QoL of Arabic Muslim women suffering from symptomatic POP. There is good correlation between anatomy (prolapse stage) and symptom as well as QoL. In the short term, correction of prolapse—with and without concomitant anti-incontinence procedure provides—reduces many prolapse related symptoms and improves QoL. Surgical correction of POP improves patients' symptoms and QoL as well.

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