ORIGINAL ARTICLE

Sexual Dysfunction after Vaginal Repair

Mohamed M. I. Farahat, Ahmed A. El Tabakh, Ayman G. A. Wahb Allah *

Department of Obstetrics and Gynecology, Faculty of Medicine for Boys, Al-Azhar University, Cairo, Egypt

Abstract

Background: ***The abnormal fall or herniation of the pelvic organs is known as pelvic organ prolapse (POP), and its incidence tends to rise with age. A growing number of adult women are dealing with POP as a result of the steady improvement in life expectancy. Because of the high recurrence rate after conventional transvaginal POP repairs, vaginal mesh was initially used for this purpose.***

Aim and objectives: ***The purpose of using a validated questionnaire based on the Female Sexual Function Index is to assess a woman's libido following vaginal repair surgery.***

Patients and methods: ***The Al-Hussien Hospital and Qena Public Hospital of Al-Azhar University conducted this prospective observational study from August 2023 to August 2024 which including 50 cases that had vaginal repair after anterior, posterior wall vaginal prolapse or vertical uterine prolapse then follow up after four months by reported questionnaire to assess female sexual function index which has normal range 2-36.***

Results: ***Study didn't find a correlation between sexual dysfunction and age. We also didn't find statistically significant differences between preoperative and postoperative sexual activity. This contradicts previous research that linked reduced libido to continued erectile dysfunction after surgery and emphasizes the significance of providing patients with thorough postoperative counseling about what to expect.***

Conclusion: ***Vaginal repair does not affect sexual dysfunction significantly after 4 months of surgery, but it may enhance sexual dysfunction in elderly patients.***

Keywords: Sexual dysfunction; Vaginal repair

1. Introduction

The incontinence, constipation, and erectile dysfunction that accompany pelvic organ prolapse (POP) in women have a negative impact on their standard of living. About a quarter of women may require a second procedure to address a recurrence within five years, and nearly one-fifth of all women will require surgery to address POP or urine incontinence at some point in their lives.[1]

A previous study found that between 11.7 and 18.7 percent of women had POP surgery at some point in their lives, and between 12.8 and 30 percent had the procedure done again.[2]

A woman's sexuality is multifaceted and dynamic, involving her physical, emotional, and mental states as well as their interplay with one another. The capacity to experience arousal, lubrication, orgasm, and satisfaction in the sexual domains is a key component of a healthy and fulfilling existence for women.[3]

There is a close relationship between the various structures of the female sexual anatomy. Several factors influence a woman's or a man's sexual response, including the amount of blood flow to the organs, the amount of sex hormones in the body, the structural integrity of the organs, and the neural innervation to those organs. Arousal is the first brain response in the sexual response cycle of females.[4]

A variety of nerve fibers, including sympathetic and parasympathetic branches from the uterovaginal nerves and somatic innervation from the pudendal nerve, innervate the female reproductive tissues. In reaction, blood flow increases to these organs, allowing for proper engorgement, transudative secretions across the vaginal wall, and the right amount of flow.[5]

Accepted 15 April 2025.
Available online 30 June 2025

* Corresponding author at: Obstetrics and Gynecology, Faculty of Medicine for Boys, Al-Azhar University, Cairo, Egypt.
E-mail address: islam.orth1592@gmail.com (A. G. A. Wahb Allah).

https://doi.org/10.21608/aimj.2025.446598

The purpose of this research is to assess the efficacy of the Female Sexual Function Index questionnaire in assessing the quality of life for women following vaginal repair surgery.

2. Patients and methods

The Al-Hussien Hospital and Qena Public Hospital participated in this prospective observational study, which ran from August 2023 to August 2024, including 50 cases that had vaginal repair after anterior, posterior wall vaginal prolapse or vertical uterine prolapse, then followed up after four months by a reported questionnaire to assess the female sexual function index, which has a normal range of 2-36. A score of less than 26.55 was considered a sexual dysfunction

Outcomes:

Female with normal sexual function, female with sexual dysfunction

Inclusion criteria:

Age 18- 50, married woman, sexually active before vaginal repair surgery and after surgery, and women who have had vaginal repair surgeries (anterior and posterior vaginal repair surgery).

Exclusion criteria:

The following are some of the psychological factors that can make it difficult for a woman to have sex: being unmarried, sexually inactive, having a husband with a sexual disorder, severe vaginal infections, a history of physical or sexual abuse, relationship problems (such as being unhappy with one's partner, which can lead to boredom during sex), depression, stress, and so on. General medical issues, such as diabetes, rheumatoid arthritis, MS, cardiovascular disease, and substance misuse.

All women were subjected to:

Detailed personal history as age-parity-residence- socioeconomic status- special habits-and any medical problems; past history: past physical or sexual abuse; family history of similar conditions.

General examination: blood pressure- pulse-and body temperature; presence of pallor or jaundice; cardiac and chest examination; abdominal examination: uterine tenderness and/or abdominal pain, and scar of previous laparotomies.

A sterile speculum and digital examination were done: to visualize the vulva and vagina for signs of infection and to visualize any female genital mutilation that may cause sexual dysfunction.

Laboratory assessment: comprehensive blood count, urinalysis, hepatic function tests, renal function tests, random blood glucose, and coagulation profile.

Gynocological U/S: to diagnose any factor that decreases sexual function and causes dyspareunia: huge fibroid, huge ovarian cysts, cervicitis (nabothian follicles)

Sample size:

FSFI scores of women who underwent traditional repair were 15.3 ± 6.8 preoperatively and 24.2 ± 7.0 postoperatively.[6]

According to Faul et al.[7] the minimum number of cases needed to detect a significant statistical difference between the total FSFI scores before and after surgery in a single group paired study is 15 cases, assuming a power of 0.90, a significance level of α = 0.05, and a correlation coefficient of 0.0. For this study, we enlisted 50 participants to account for potential dropouts and conduct additional analyses.

Statistical analysis

It was with SPSS v28 (IBM Inc., Armonk, NY, USA) that the statistical analysis was carried out. The quantitative variables were shown using standard deviation (SD) and mean (Mean). Qualitative factors were displayed using percentages and frequency counts.

To compare the means of two populations when there is a correlation between the samples, statisticians employ a paired sample t-test. It was deemed statistically significant if the two-tailed P value was less than 0.05.

Ethical considerations:

After explaining the study's goals and methods, we made sure that everyone who took part in it gave their written consent. In this study, participants' right to privacy and confidentiality was upheld at every stage. Prior to commencing research, approval will be sought from the Al-Azhar Faculty of Medicine's institutional review board (IRB).

3. Results

Table 1. Information on the patients' demographics.

CHARACTERISTICS	NUMBER
AGE, MEAN (SD) [RANGE]	40.4 (6.3) [29–46]
PARITY, MEAN (RANGE)	2.4 (0–4)
BMI, MEAN (RANGE)	25.5 (19–38)

This study included 50 patients, a mean age of 40.4 years, ranged from 29 to 46 years, a mean parity 2.4, ranging from 0 to 4. On the other hand, the mean BMI 25.5, ranged from 19 to 38, (table 1).

Table 2. Morbidities of studied patients.

HISTORY, N/TOTAL (%)	
NAD	38 (76%)
CHRONIC LUNG DISEASE	1 (2%)
HYPERTENSION	5 (10%)
DIABETES MELLITUS	5 (10%)
NEUROLOGICAL DISEASE	1 (2%)

Regarding the presence of comorbidities, 38 (76%) of patients have no morbidities, one patient has chronic lung disease, 5 patients (10%) have hypertension and diabetes mellitus and one patient has neurological disease, (table 2; figure 1).

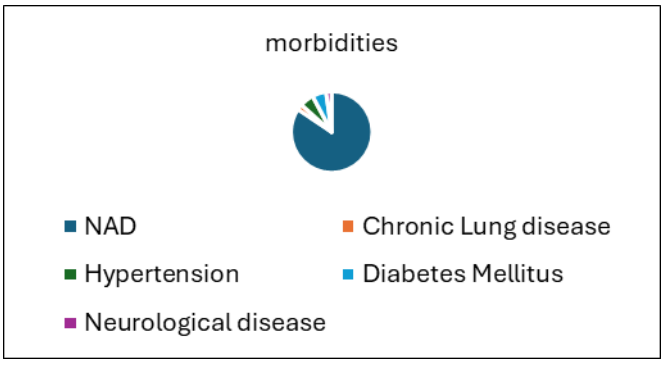

Figure 1. Morbidities of studied patients.

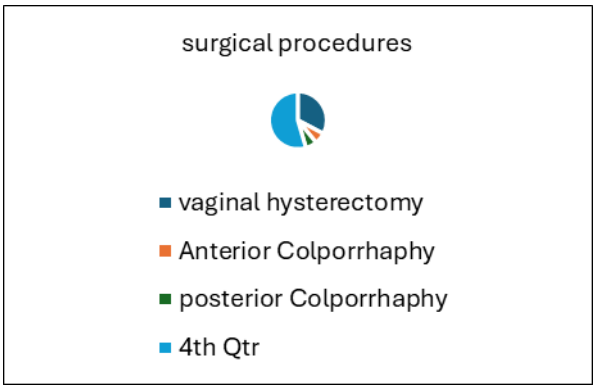

Figure 2. Classification of surgical procedures.

Table 3. Vaginal examination of the studied patients.

VAGINAL EXAMINATION, N/TOTAL (%)	
CYSTOCELE	
NAD	33 (66%)
FIRST DEGREE	10 (20%)
SECOND DEGREE	2 (4%)
NOT STAGED	5 (10%)
RECTOCELE	
NAD	40 (80%)
FIRST DEGREE	8 (16%)
SECOND DEGREE	2 (4%)

Regarding vaginal examination,10 patients have first degree cystocele, 2 patients have second degree, while 8 patients have first degree rectocele and 2 patients have second degree rectocele, (table 3).

Table 4. Classification of surgical procedures.

SURGICAL PROCEDURES (%)	
VAGINAL HYSTERECTOMY	36 (72%)
ANTERIOR COLPORRHAPHY	7 (14%)
POSTERIOR COLPORRHAPHY	7 (14%)

Regarding surgical procedures, 36 patients were subjected to vaginal hysterectomy, 7 patients were subjected to anterior colporrhaphy, and 7 patients were subjected to posterior colporrhaphy. Regarding FSFI score, The FSFI variables before surgery and four months after surgery weren't different statistically, (table 4; figure 2).

Table 5. FSFI score before and after surgery

	PREOPERATIVELY	POSTOPERATIVELY	P VALUE
FSFI LUBRICATION	4.07 ± 1.62	4.01 ± 1.72	0.817
FSFI ORGASM	4.04 ± 1.81	3.95 ± 1.79	0.677
FSFI SATISFACTION	4.5 ± 1.21	4.61 ± 1.22	0.556
FSFI PAIN	4.34 ± 1.46	3.99 ± 1.57	0.109
FSFI TOTAL	25.16 ± 6.67	24.63 ± 6.58	0.496

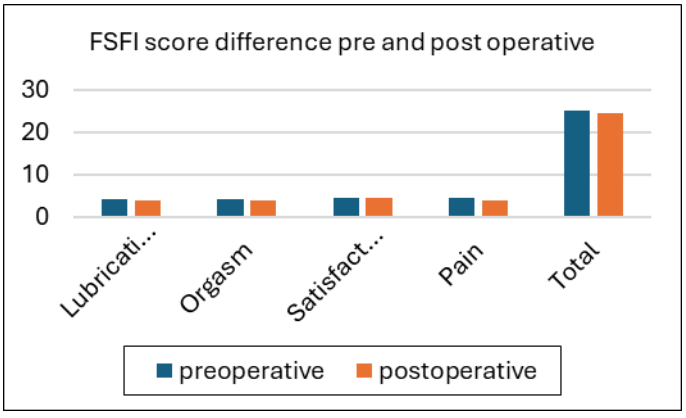

Figure 3. FSFI pre and post operative.

Table 6. Correlation of age and variables of FSFI

		N	MEAN	SD	95% CI		MIN	MAX	P-VALUE
					LB	UB			
LUBRICATION	age less than 30 years	8	3.500	0.4629	3.113	3.887	3.0	4.0	0.670
	age more than 30 years	42	3.564	0.3740	3.448	3.681	3.0	4.0	
	Total	50	3.554	0.3850	3.445	3.663	3.0	4.0	
ORGASM	age less than 30 years	8	4.338	0.2504	4.128	4.547	4.0	4.6	0.802
	age more than 30 years	42	4.362	0.2508	4.284	4.440	4.0	4.7	
	Total	50	4.358	0.2483	4.287	4.429	4.0	4.7	
SATISFACTION	age less than 30 years	8	4.525	0.2493	4.317	4.733	4.2	4.8	0.556
	age more than 30 years	42	4.467	0.2563	4.387	4.547	4.0	4.8	
	Total	50	4.476	0.2536	4.404	4.548	4.0	4.8	
PAIN	age less than 30	8	2.813	0.7039	2.224	3.401	2.0	3.5	0.732

	years							
	age more than 30 years	42	2.738	0.5323	2.572	2.904	2.0	3.5	
	Total	50	2.750	0.5556	2.592	2.908	2.0	3.5	
TOTAL	age less than 30 years	8	23.487	1.0162	22.638	24.337	22.2	24.6	0.705
	age more than 30 years	42	23.331	1.0753	22.996	23.666	21.8	24.8	
	Total	50	23.356	1.0576	23.055	23.657	21.8	24.8	

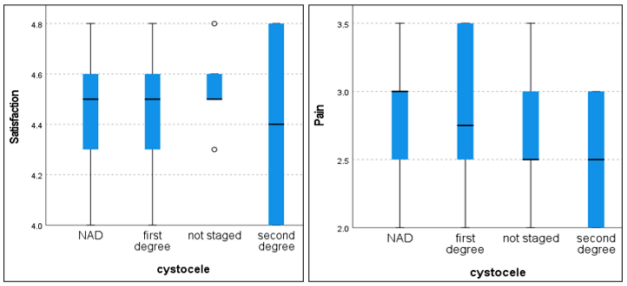

Figure 4. Correlation of the presence of cystocele and FSFI.

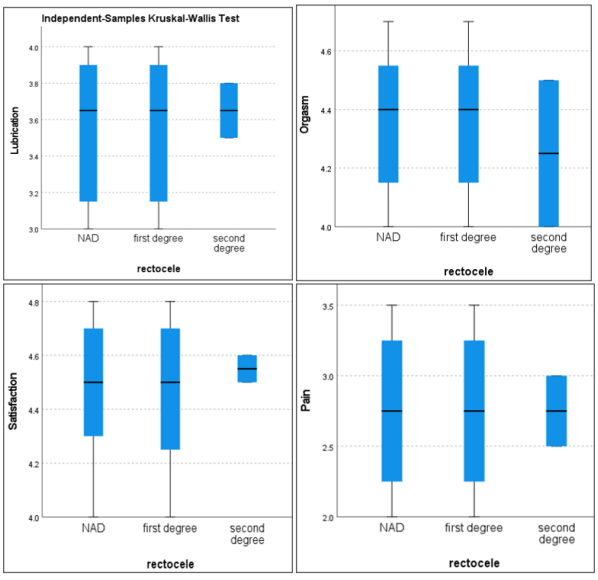

Figure 5. Correlation of rectocele and FSFI.

4. Discussion

Even though the prolapse stage and incontinence symptoms improved after vaginal surgery for pelvic organ prolapse, the sexual function scores (as determined by the FSFI) and sexual frequency remained the same. The level of discomfort caused by sexual symptoms remained the same after surgery; however, the obstacles to sexual function decreased. Vaginal bulge affecting sexual activity was the most common preoperative complaint, while vaginal pain was the most common postoperative complaint.[8]

Those who had undergone pelvic prolapse surgery were the subjects of our investigation to determine the severity of sexual dysfunction. Unfortunately, we agreed on a 4-month follow-up time, which might not have been sufficient to ensure that symptoms would have resolved. Nevertheless, there is strong evidence from the literature to support a 6-month follow-up period.[9]

Half of the fifty patients in our study had a four-month follow-up; their ages ranged from 29 to 46, and their parities ranged from 0 to 4. The mean age was 40.4 years. The mean body mass index, however, was 25.5, with a range of 19–38 kg/m2.

In our results, we didn't find a correlation between sexual dysfunction and age. This comes in concordance with Pauls et al.[10] as they mentioned a correlation between declining sexual function and becoming older, implying that being older is a risk factor for having impaired sexual function, as has been shown before.

We also didn't find statistically significant differences between preoperative and postoperative sexual activity, unlike Pauls et al.,[10] A decline in sexual function was more common in patients who had higher scores in this area before surgery.

This contradicts previous research that linked reduced libido to continued erectile dysfunction after surgery and emphasizes the significance of providing patients with thorough postoperative counseling about what to expect.[11]

Others have documented dyspareunia as a result of vaginal surgery.[12]

We failed to account for postoperative discomfort in our FSIS score, despite research addressing this issue. While 27% of patients reported vaginal tightness, only 4% found it to be the most annoying barrier, and this was not necessarily linked with pain complaints.[10]

The Brazilian trial Feldner et al.,[6] Twelve months following the procedure, the FSFI was utilized to determine whether traditional colpophorraphy or SIS graft repair improved sexual quality of life. The results did not indicate any difference between the two methods.

These findings corroborated our own, as when it came to surgical techniques, 36 patients underwent vaginal hysterectomy, 7 underwent anterior colporrhaphy, and 7 underwent posterior colporrhaphy.

It seems that the only way anterior repair can negatively impact sexual function is if it is done in

conjunction with another operation. There was mild-to-severe postoperative dyspareunia in 56% of the 23 women analyzed by Colombo et al. after anterior repairs; however, these same patients also underwent posterior repairs and perineorrhaphy.[13]

It should be noted that there are certain limitations to the FSFI questionnaire that were used to evaluate sexual function in women with PFDs. It is not the intent of the FSFI questionnaire to evaluate how PFDs affect sexual health.

That being the case, it might not pick up on significant shifts in sexual function within our community. Furthermore, because sexual activity is not screened for in the questionnaires, the effect of PFDs on sexual function may be under-estimated. This is because women experiencing severe dysfunction may choose to stop having sexual relations.[14]

4. Conclusion

Vaginal repair does not significantly affect sexual dysfunction after 4 months of surgery, but it may enhance sexual dysfunction in elderly patients.

Disclosure

The authors have no financial interest to declare in relation to the content of this article.

Authorship

All authors have a substantial contribution to the article

Funding

No Funds : Yes

Conflicts of interest

There are no conflicts of interest.

References

1. Chang MH, You SL, Chen CJ, et al. Long-term Effects of Hepatitis B Immunization of Infants in Preventing Liver Cancer. Gastroenterology. 2016;151(3):472-480.e1.
2. Ngo YG, Huang KH, Kung FT, et al. The effects of “unilateral midurethral sling cut down” in women with voiding dysfunctions after anti-incontinence surgery. International Urology and Nephrology.2019;(51):1501-1506.
3. Abd Elaziz MA. Is the Female Sexual Function Affected by the Vaginal Wall Prolapse?. Suez Canal University Medical Journal. 2013; 16(2):104-111.
4. Pauls RN, Kleeman SD, Segal JL, et al.. Practice patterns of physician members of the American Urogynecologic Society regarding female sexual dysfunction: results of a national survey. Int Urogynecol J Pelvic Floor Dysfunct. 2005;16(6):460-467.
5. Saleh DM, El Mallah SA, Kenawi NE. Department of Obstetrics & Gynecology, Faculty of Medicine, Al Azhar University for girls, Cairo.2019.
6. Feldner PC Jr, Delroy CA, Martins SB, et al. Sexual function after anterior vaginal wall prolapse surgery. Clinics (Sao Paulo). 2012;67(8):871-875.
7. Faul F, Erdfelder E, Lang AG, et al. *Power 3: a flexible statistical power analysis program for the social, behavioral, and biomedical sciences. Behav Res Methods. 2007;39(2):175-191.
8. PADOA A, FLIGELMAN T, TOMASHEV R. Problems Associated with Sexual Activity. Textbook of Female Urology and Urogynecology. 2023; CRC Press.
9. Weber AM, Walters MD, Piedmonte MR. Sexual function and vaginal anatomy in women before and after surgery for pelvic organ prolapse and urinary incontinence. Am J Obstet Gynecol. 2000;182(6):1610-1615.
10. Pauls RN, Silva WA, Rooney CM, et al. Sexual function after vaginal surgery for pelvic organ prolapse and urinary incontinence. Am J Obstet Gynecol. 2007;197(6): 622.e1-622.e6227.
11. Kingsberg SA, Larkin LC, Liu JH. Clinical Effects of Early or Surgical Menopause. Obstet Gynecol. 2020;135(4):853-868.
12. Tunuguntla HS, Gousse AE. Female sexual dysfunction following vaginal surgery: myth or reality?. Curr Urol Rep. 2004;5(5):403-411.
13. Colombo M, Vitobello D, Proietti F, et al. Randomised comparison of Burch colposuspension versus anterior colporrhaphy in women with stress urinary incontinence and anterior vaginal wall prolapse. BJOG. 2000;107(4):544-551.
14. Espuña Pons M. Sexual health in women with pelvic floor disorders: measuring the sexual activity and function with questionnaires--a summary. Int Urogynecol J Pelvic Floor Dysfunct. 2009;20 Suppl 1:S65-S71.