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HOW TRANSVAGINAL MESH SURGERY FOR ADVANCED PELVIC ORGAN PROLAPSE INFLUENCE FEMALE SEXUAL FUNCTION?

Hypothesis / aims of study

Pelvic organ prolapse (POP) is common condition among postmenopausal women and affects up to 50% of parous women over 50 years old [1]. Most of them are sexually active. Sexual well-being is an important aspect of women's health and dysfunction connected with POP can lead to serious decrease in quality of life and marital relationship. Sexual arousal results in congestion and vaginal wall thickening and lubrication [2]. All of these functions might be altered by vaginal surgery. Vaginal dissection and wide preparation may cause injury to distal pelvic and perineal nerves that reach the clitoral tissue and subsequently lead to difficulty in satisfactory sexual activity [3]. Theoretically, effective surgical restoration of pelvic anatomy might improve sexual function postoperatively. However the use of transvaginal nonabsorbable polypropylene meshes for POP surgery can result in an increase of pain due to excessive fibrosis causing vaginal stiffness and dryness, especially in case of the mesh erosion. Nowadays reconstructive surgery using synthetic grafts are the mainstay of surgical POP treatment but there is no unequivocal answer whether these procedures impair or not patient's sexual function.

The primary aim of this study was to evaluate the influence of reconstructive surgery with transvaginal mesh for POP on sexual function using the general sexual questionnaire: Female Sexual Function Index (FSFI). The secondary aim was to compare sexual function in patients who underwent prolapse repair alone with women who underwent prolapse repair combined with additional surgical restoration of perineal body.

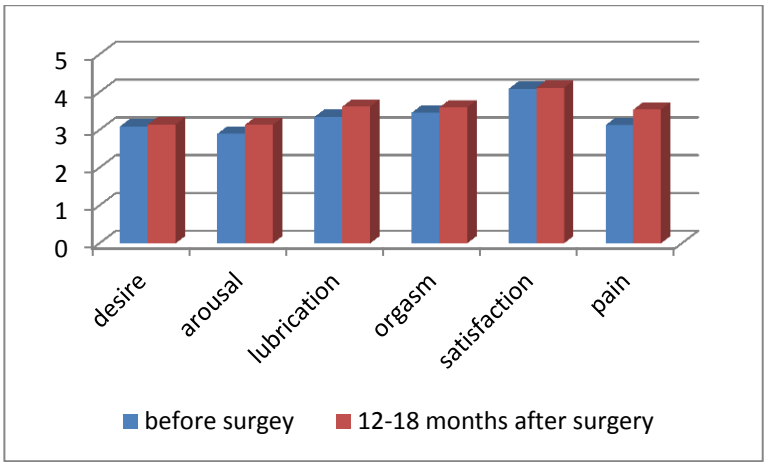
Study design, materials and methods

Between June 2008 and January 2010, 118 patients who signed informed consent and fulfilled the inclusion criteria, underwent reconstructive surgery due to advanced POP. Fifty nine were sexually active and this group was further analyzed. The median age of sexually active patients was 53 years (from 33y to 67y). Most of them, 49 (83%), were postmenopausal. Prolapse severity before operation was evaluated using Pelvic Organ Prolapse Quantification Scale (POP-Q). Eighteen patients (30.5%) had stage IV according to POPQ scale, 36 patients (61%) had both cystocoele in stage III and rectocoele in stage II, 5 patients (8.5%) had stage III of rectoenterocoele. Five patients (8.5%) previously underwent hysterectomy. In 49 (83%) women both anterior and posterior Prolift® System was done, in 5 (8.5%) patients only posterior Prolift® System operation was performed whereas in 5 (8.5%) cases Total Prolift® System was inserted. In 19 (32.2%) patients posterior mesh repair was supplemented by surgical restoration of perineal body using absorbable Vicryl No. 1 sutures. Women were invited to complete the FSFI questionnaire before and 12-18 months after surgery. McNemar's test was used to compare pre- and postoperative responses to individual questions. p value of <0.05 was considered statistically significant.

Results

Follow-up visits, evaluating sexual function and anatomical outcome as well, were scheduled between 12 and 18 months after operation. Analysis of FSFI questionnaire showed no changes in all six domains (desire, arousal, lubrication, orgasm, satisfaction and pain) as well as full score before and after surgery. Admittedly patients reported better sexual functioning postoperatively compared with period before operation however these changes were not statistically significant (p>0.05). Results are shown in Fig.1 and Tab.1. Comparing group of women who underwent additional surgical restoration of perineal body with patients without this procedure we did not observed any functional differences in FSFI (p>0.05 in all domains and full score).

Figure 1. FSFI questionnaire score before and after surgery.



Tabele 1. FSFI questionnaire score before and after surgery.

	BEFORE SURGERY	**AFTER SURGERY**	

DOMENS	Median	Median	**P**
Desire	3.10	3.15	0.79
Arousal	2.90	3.14	0.66
Lubrication	3.35	3.62	0.92
Orgasm	3.46	3.60	0.98
Satisfaction	4.09	4.12	0.60
Pain	3.13	3.54	0.99
Full score	20.19	20.84	0.51

Interpretation of results

Analysis of results shows that reconstructive POP surgery despite of proper restoration of anatomy do not markedly improve sexual functions. However it should be stressed that POP mesh surgery do not increase ailments existing before operation, especially concerning dyspareunia. This is an additional prove that POP is only one of many factors affecting the female sexual functions. On the other hand our study shows that synthetic prosthesis implantation do not adversely affect these functions. Also restoration of perineal body, previously considered as a cause of *de novo* dyspareunia, does not increase pain postoperatively.

Concluding message

Surgical treatment of genital prolapse with polypropylene meshes interposed by vaginal route does not negatively affect sexual functions however patients should not expect significant improvement after this type of operation despite of proper anatomical restoration. Additionally performed surgical reconstruction of perineal body does not appear to cause dyspareunia and deteriorate female sexual function.

References

1. Obstet Gynecol. 2001; 98:646-51.
2. J Urol. 2006; 175:439-46.
3. Eur Urol. 2006; 50:14-6.

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What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Medical University of Lublin Ethics Committee**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**