524
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EVALUATION OF SEXUAL FUNCTION IN WOMEN WITH STRESS URINARY INCONTINENCE (SUI) PRE- AND POST- CONTINENCE SURGERY USING THE TRANSOBTURATOR TAPE (TOT)

Hypothesis / aims of study

An assumption has been made that prolapsed and urinary incontinence (UI) cause FSD and, by implication, corrective surgery will improve female sexual function(FSF). Subsequent series have evaluated the impact of continence intervention on female sexual dysfunction(FSD) with conflicting results. The aims of this study were to evaluate the prevalence of FSD in patients with pure urodynamically-proven stress incontinence(USI), pre- and post-placement of a TOT and to determine the impact of this procedure on FSF.

Study design, materials and methods

Women with pure SUI and a stable bladder were recruited. TOT was placed according to a standard technique. Pre-operatively and at 6 weeks 6-, 12-, and 24-months, participants underwent a 1-hr pad test and completed the ICIQ-SF and ASFQ. The ASFQ consists of 15 questions with 4 domains (desire, arousal/sensation, arousal/lubrication, orgasm). Subjects were asked regarding sexual activity and reasons for inactivity were recorded. Those active were questioned about coital incontinence and dyspareunia. Vaginal examination was performed during each visit to look for tape erosion and tenderness.

Results

87 women were recruited. Median age was 54(IQR50-61)yrs, and BMI 29(IQR 25-33)kg-m2. Table 1 lists the proportion of women not sexually active. Reasons for sexual inactivity were: no partner(72%), loss of libido(12%), partner factor(4%), SUI(4%), and others(8%).

Table 1: Women not sexually active

	Pre-op	6 wks	6 mos	12 mos	24 mos
Number of patients	87	83	60	49	24
Not active	25 (29%)	20 (24%)	12 (20%)	20 (41%)	7 (29%)

Median scores for all visits indicated a high probability of FSD pre-operatively (Table2).

Table 2: Median ASFQ scores per visit

	Pre-op	6 wks	6 mos	12 mos	24 mos
Desire (≤17*)	15	13	15	12	13
Arousal-sensation (≤10*)	8	0	8	6	9
Arousal-lubrication (≤5*)	4	0	4	2	3
Orgasm (≤8*)	9	0	7	7	6

*values indicating high FSD

Sub-analysis of women with a high probability of FSD and normal FSF is demonstrated in Table 3.

Table 3: Number of patients with FSF and a high probability of FSD pre- and post-operatively

	Pre-op n=87	6 wks n=83	6 mos n=60	12 mos n=49	24 mos n=24
High probability of FSD					
Desire	31	42*	33	19	13
Sensation	34	43*	32	20	13
Lubrication	28	50***	35*	21	14
Orgasm	21	37*	24	16	11
Normal sexual function					
Desire	8	0**	1*	2	2
Sensation	7	1*	6	3	1
Lubrication	12	0***	3*	1*	1
Orgasm	12	4*	6	4	1

*p<0.05,**p<0.01,***p<0.001 by Chi-square test

Pre-operatively, median score of the ICIQ-SF was 14(IQR10-16) which was significantly reduced at follow-up: 3(IQR0-6) at 6wks, 0(IQR0-4) 6mos, 2(IQR0-4) 12mos, and 2(IQR0-8) 24mos (p<0.01). There were 5 cases of erosion. No women with tape erosions returned ASFQ scores reflecting FSD. None of the participants complained of dyspareunia. Age and BMI did not correlate with ASFQ domain scores at pre-operative assessment or follow-up. There was no correlation between improved ICIQ-SF and ASFQ scores. 21% of patients reported pre-operative coital incontinence. All were cured after placement of TOT. Despite this, there was no improvement in their ASFQ scores.

Interpretation of results

Most studies report that there is a higher rate of sexual inactivity and FSD in patients with UI compared to the general population. In our study, 29% of our patients were sexually inactive, but with absence of a partner being the most common reason(72%) and UI cited only by 4%.

Studies imply that with increasing age, sexual activity declines and FSD increases. We did not find a significant correlation between age and ASFQ domains. FSD therefore does not seem to worsen with increasing age. BMI has also been suggested to affect FSD as women with increased BMI have higher rates of UI. We found no correlation between BMI and ASFQ domains.

FSD has been attributed to UI. Our study showed that USI does not correlate with FSD pre- and post-operatively as evidenced by ASFQ and ICIQ-SF scores. Studies that evaluate the effect of surgical procedures on FSF are scarce and conflicting. To our

knowledge, our study is the first to evaluate the effect of TOT on FSF in a large cohort using a validated multi-domain tool(ASFQ). Our results demonstrate a significant improvement in SUI and QoL after TOT as reflected by improvement in ICIQ-SF scores. However, there was no concomitant improvement in FSF as reflected by ASFQ scores. We therefore suggest that SUI and FSD are independent of each other. A deterioration of ASFQ scores was seen at 6 wks with return to pre-operative values at subsequent follow-ups. We should remain cautious in suggesting improvement in FSF by treating USI. It is best to say that no improvement should be anticipated. However, in patients who experience worsening FSF within 6 weeks post-operatively, our study suggests that this is not a long-term effect. Our recommendation is that they not participate in penetrative intercourse for the first 6 weeks. Furthermore, we may reassure them that the operation itself does not seem to cause FSD long-term.

Published urogynaecology studies mostly discuss FSD in relation to dyspareunia or frequency of sexual activity. None of the women in this study complained of dyspareunia pre-operatively. Post-operatively, none of our patients developed dyspareunia.

Mesh erosion is a known complication of a mid-urethral tape. Our erosion rate was 6%. None of these women complained of dyspareunia. Based on this, we can reasonably reassure patients that should erosion occur this is unlikely to impact on FSF or cause FSD.

In our study, 22% complained of coital incontinence. Post-operatively, all had complete resolution of coital incontinence and improvement of ICIQ-SF scores. There was no concomitant significant improvement in FSF. This further supports the hypothesis that incontinence is not solely responsible for FSD in this group.

Our study suggests that in women with pure SUI, incontinence itself is not the cause of FSD and other factors should be considered. However, SUI may contribute to an alteration in sexual behaviour that is not rectified by surgery. There are a multitude of factors that affect FSF. As we have found that age, BMI and SUI have little impact on FSD, other complex relationship and cultural issues are likely to play a role but less readily amenable to study.

Concluding message

We have no evidence to support that SUI is related to FSD or that successful continence intervention improves FSF. As the causes of FSD are varied and heterogenous, it may be not be appropriate to approach FSD in the same way we approach other pelvic floor dysfunction problems. As FSD is multi-factorial, the best approach to treatment should be individualized.

There are various tools and QoL questionnaires employed in the hope that these direct us to areas of FSF affected and to possible causes of the problem which greatly impacts on QoL. However, are these tools enough and appropriate? From our experience, most patients are willing to answer a FSF questionnaire. We suggest the use of a validated tool such as ASFQ to help identify the population that suffers from FSD. This tool is short, concise, easy to interpret and ideal in the clinical setting to help identify the affected population. Core training in psychosexual issues is essential for all physicians involved in the care of women as FSF is an important component of QoL.

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