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Comparison of the effects of voluntary termination of pregnancy and uterine evacuation for medical reasons on female sexual function

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ABSTRACT

Objective: A wide spectrum of emotions are experienced during abortion, including anxiety, sadness and grief, guilt, pessimism about future pregnancies, disturbed self-perception and loss of confidence in intimate relationships. This study aimed to compare the short-term effects of legal voluntary termination of pregnancy with uterine evacuation for medical reasons on female sexual function.
Study design: The study group was comprised of 50 patients admitted to the Family Planning Clinic for legal voluntary termination of pregnancy <10 weeks of gestation, and the control group was comprised of 50 patients who underwent manual vacuum aspiration of the products of conception for medical reasons (e.g. inevitable abortion, incomplete abortion, fetal abnormality and teratogenic drug use). Female sexual function in the two groups was evaluated using the Golombok–Rust Inventory of Sexual Satisfaction (GRISS). GRISS scores immediately before and 3 months after termination of pregnancy were compared within each group and between the two groups.
Results: Mean total GRISS scores before and after termination of pregnancy were 5.33 and 8.12 in the study group, and 6.02 and 6.4 in the control group, respectively ($p < 0.05$). The increase in GRISS scores for both groups indicated deterioration in sexual function ($p = 0.000$ and $p = 0.016$, respectively). Three months after termination of pregnancy, the total GRISS score was significantly higher in the study group compared with the control group (8.12 vs 6.4, $p < 0.05$).
Conclusion: Female sexual dysfunction is a complicated concept that is affected by multiple factors over a woman's lifetime. It is important to consider female sexual function as a part of reproductive health, with a close relationship with contraception. As such, patients should receive counselling about sexual function and contraception as part of comprehensive abortion care.

Introduction

The World Health Organization's definition of health as 'a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity' addresses both reproductive and sexual health, and recognizes these aspects as basic human rights [1]. Various studies have demonstrated some level of emotional distress, anxiety and sexual dysfunction in women following induced abortion [2].

Sexual dysfunction in women undergoing induced abortion may be related to relationship problems with their spouse that led to an unwanted pregnancy [3]. However, studies have shown that a minority of women undergoing termination of pregnancy experienced sexual dysfunction, whereas the majority had no symptoms [4].

Information about the effects of voluntary termination of pregnancy (VTOP) on psychosocial status and sexual function of the women is limited. Published studies suggest that 30% of women experience sexual dysfunction following VTOP, and sexual dysfunction is correlated with affective changes after abortion [3,5].

The aim of this study was to evaluate the frequency of sexual dysfunction following evacuation of the pregnant uterus (UE) for medical reasons compared with legal VTOP, and to compare the severity of symptoms between the two groups.

Materials and methods

This study was conducted among patients admitted to Etlik Zubeyde Hanim Women's Health Education and Research Hospital. Approval was received from the local education and researchboard.

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Fifty patients admitted to the Family Planning Clinic for VTOP, which is legal up to 10 weeks of pregnancy in Turkey, were recruited as the study group, and 50 pregnant women below 10 weeks of gestation, admitted to the Early Pregnancy Unit over the same period and who underwent uterine evacuation (UE) by manual vacuum aspiration for medical reasons (inevitable or incomplete abortion, missed abortion or termination of pregnancy due to fetal abnormality or teratogenic drug use) were recruited as the control group. Exclusion criteria were: an emergency situation that needed immediate intervention; current or past psychiatric disorder or psychiatric drug use; presence of chronic debilitating disease; known or treated sexual dysfunction; drug abuse; and failure to attend the follow-up visit. All of the patients recruited volunteered to participate in the study and answer the questionnaire by themselves, and signed an informed consent form.

Demographic data, and medical and obstetric histories were obtained from each study participant. All underwent general medical assessment, gynaecological examination and transvaginal ultrasonography. The patients were informed of their current health status, and gave their signed consent for the scheduled procedure. The patients completed the GRISS questionnaire in privacy accompanied by a nurse before the procedure. Operative procedures were performed using manual vacuum aspiration under local anaesthesia with 5 ml of 2% lidocaine solution (Jetmonal flacon; Adeka, Istanbul, Turkey).

Differences between the two groups in terms of sexual dysfunction and mood changes (anxiety and depression) were evaluated using the validated Turkish version of the Golombok–Rust Inventory of Sexual Satisfaction (GRISS) [6,7].

All patients were asked to attend a follow-up visit 3 months after the procedure, and to complete a repeat GRISS form.

The GRISS is evaluated with a total scale score and scores for various subscales. High GRISS scores indicate greater sexual dysfunction and disruption in relationship quality. Raw scores are converted to standard scores between 1 and 9. Scores $\geq$5 indicate a problem in an individual subscale. An increase in the scores for individual subscales also shows impaired sexual function. Differences between the two groups, and pre-and post-abortion GRISS scores within the same group were evaluated using the mean GRISS score, and changes in the subscales related to female sexual dysfunction (namely infrequency, non-communication, female dissatisfaction, vaginismus, female non-sensuality, female avoidance and anorgasmia) were compared.

Statistical analyses were performed using PASW Statistics 18. In descriptive statistics, continuous variables with a normal distribution were expressed as mean $\pm$ standard deviation, continuous variables with a non-normal distribution and discontinuous variables were expressed as median (range), and categorical variables were expressed as number (%). Differences between the study group (VTOP) and the control group (UE by manual vacuum aspiration for medical reasons) in terms of sexual function before and after the procedure were compared using Student's *t*-test, Wilcoxon signed-rank test, McNemar test and Marginal Homogeneity test. Student's *t*-test, Mann–Whitney *U*-test, Chi-squared test, likelihood ratio, continuity correction and Fisher's exact test were used to test similarities within the groups. Generalized estimating equations were used to determine which factors contributed to the development of sexual dysfunction before and after the procedure. $p < 0.05$ was considered to indicate statistical significance.

Results

Out of 100 patients recruited, 50 constituted the study group (VTOP) and 50 constituted the control group (UE). One patient in the study group did not attend the 3-month follow-up visit and was therefore excluded from the study. Table 1 summarizes the sociodemographic characteristics of the two groups.

The reasons for VTOP in the study group and the reasons for UE in the control group were evaluated. The main reasons for legal VTOP in the study group were unwanted pregnancy (71.4%), economic factors (16.3%) and social factors (12.3%). The main reasons for UE in the control group were missed abortion (22%),

Table 1
Sociodemographic characteristics of the two groups.

	Control group	Study group	*p*-value
Age, mean $\pm$ SD	27.56 $\pm$ 5.96	30.43 $\pm$ 5.83	0.017
Education level, *n* (%)			
• Literate	1 (2)	1 (2)	0.059
• Primary school	11 (22)	19 (38.8)	
• Secondary school	20 (20)	9 (18.4)	
• High school	15 (30)	17 (34.7)	
• University and higher	13 (26)	3 (6.1)	
Employment status, *n* (%)			
• Employed	23 (46)	8 (16.3)	0.003
• Unemployed	27 (54)	41 (83.7)	
Level of income, *n* (%)			
• Low	4 (8)	9 (18.4)	0.168
• Moderate	39 (78)	37 (75.5)	
• High	7 (14)	3 (6.1)	
Is there another person living in your home other than your spouse? *n* (%)			
• Yes	12 (24)	8 (18.2)	0.663
• No	38 (76)	36 (81.8)	
Are you sleeping with your spouse in the same bed? *n* (%)			
• Yes	49 (98)	41 (87.2)	0.98
• No	1 (2)	6 (12.8)	
Does your child co-sleep with you at night? *n* (%)			
• Yes	17 (34)	20 (42.6)	0.006
• No	14 (28)	22 (46.8)	
• I do not have child	19 (38)	5 (10.6)	
Relationship with spouse, *n* (%)			
• Bad	4 (8)	3 (6.2)	0.51
• Moderate	14 (28)	6 (12.2)	
• Good	32 (64)	40 (81.6)	
Have you ever been pregnant? *n* (%)			
• Yes	37 (74)	44 (89.8)	0.076
• No	13 (26)	5 (10.2)	
Have you ever delivered a baby? *n* (%)			
• Yes	30 (60)	42 (85.8)	0.008
• No	20 (40)	7 (14.2)	
Number of living children, *n* (%)			
• 0	20 (40)	9 (18.4)	0.001
• 1	13 (26)	6 (12.2)	
• $\geq$2	17 (34)	34 (69.4)	
Mode of first delivery, *n* (%)			
• Caesarean section	7 (23.3)	8 (19)	0.883
• Normal spontaneous vaginal delivery	23 (76.7)	34 (81)	
Contraception method, *n* (%)			
• None	17 (34)	1 (2)	0.000
• Traditional method	11 (22)	22 (44.8)	
• Modern method	22 (44)	26 (53)	
Satisfaction with contraception method, *n* (%)			
• Both of us are dissatisfied	2 (6.1)	15 (31.3)	0.014
• I am satisfied, my spouse is not	4 (12.1)	8 (16.7)	
• My spouse is satisfied, but I am not	5 (15.2)	7 (14.6)	
• Both of us are satisfied	22 (66.7)	18 (37.5)	
Chronic disease, *n* (%)			
• Present	8 (16)	10 (20.4)	0.570
• Absent	42 (84)	39 (79.6)	