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Female sexual function in urological practice

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CHAPTER 3

Multiple pelvic floor complaints are correlated with sexual abuse history

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INTRODUCTION

International estimates of the prevalence of sexual abuse are high. In a review from Kellogg and the Committee on Child Abuse and Neglect in 2005, it is suggested that each year, approximately 1% of children experience some form of sexual abuse, resulting in the sexual victimization of 12 - 25% of girls and 8 - 10% of boys by 18 years of age (1).

Results of a national telephone survey conducted in 2001-2003 in the United States indicate that 1 in 59 U.S. adults (2.7 million women and 978,000 men) experienced unwanted sexual activity in the 12 months preceding the survey and that 1 in 15 U.S. adults (11.7 million women and 2.1 million men) have been forced to have sex during their lifetime (2).

The relationship between sexual abuse and urinary tract symptoms, sexual abuse and gastrointestinal symptoms, or sexual abuse and sexual dysfunction has been described in many articles, but it has not been quantified statistically (3-11). The pelvic floor controls isolated and integrated functions, sustains proper anatomic relationships between pelvic visceral organs and its outlets, and shares the basic mechanism with various visceral organs that control their function. The pelvic floor, consisting of muscular and fascial components, is the binding element between these organs. It is also considered to be an influential factor in dysfunction and subsequently behavior of the genital system in both men and women (12). However, literature is scarce on the topic of the diagnostic investigation of pelvic floor, and there is a lack of uniformity in the description of the anatomy per se and the nomenclature of the pelvic floor (13-15). A relationship between the complaints of micturition, defecation, and sexual dysfunction related to the pelvic floor dysfunction and a history of sexual abuse has been suspected, but has not been previously examined or reported upon to date.

The first aim of this study was to document the prevalence rates of reported sexual abuse in a large sample of female patients with complaints of the pelvic floor. The second aim was to evaluate the frequency of complaints in the different domains of the pelvic floor, such as complaints of micturition, defecation, and sexual function, in female patients reporting sexual abuse, and comparing these data with female patients without a history of sexual abuse.

Our hypothesis was that patients referred to a tertiary center with complaints of micturition, defecation, and/or sexual dysfunction related to the pelvic floor dysfunction are more likely to have of a history of sexual abuse than women with complaints in fewer domains of the pelvic floor.

METHODS

All female patients referred between January 2004 and November 2007 by urologists, gynecologists, surgeons, or gastroenterologists to our out patient pelvic floor center for pelvic floor evaluation because of complaints of micturition, defecation, and /or sexual dysfunction possibly related to pelvic floor dysfunction were included.

The pelvic floor clinician assessed the medical history of the patients. This consisted of a pelvic floor questionnaire in which different domains of the pelvic floor (micturition, defecation and sexual function) were structurally evaluated. The Pelvic Floor Inventories Leiden (PelFIs), a validated questionnaire, was used (16). At the start of the development of the PelFIs, the type of sexual abuse was not specified, only a history of sexual abuse was recorded. Later on, the PelFIs was improved addressing the nature of sexual abuse: incest, sexual intimidation, rape, marital rape, sexual harassment, including forcible fondling, or not (otherwise) specified. The PelFIs is only validated in Dutch. An English version is currently validated in several English native speaking countries. A retrospective search was performed to evaluate if the referring physician has documented the type of sexual abuse in the patients' medical record.

For the analysis, patients were divided in two groups: patients with a history of sexual abuse (Group I) and patients without a history of sexual abuse (Group II). If a patient had at least one of the following complaints related to the different domains of the pelvic floor, we defined her as positive for that domain. The domains are the urological domain, gastrointestinal domain, and sexual domain (Table 1). The data were analysed using SPSS version 14 (SPSS Inc., Chicago, IL., USA). Differences in frequencies were evaluated using Pearson's chi-square test or Fisher's exact test when cells with less than 5 expected subjects were present.. A two-sided P-value <0.05 was considered statistically significant.

RESULTS

A total of 185 female patients were retrospectively included and evaluated by a pelvic floor physiotherapist. No patients were excluded. The mean age of the population was 47.1 years (standard deviation, 15.5 years). Twenty-three percent of the patients (42/185) reported a history of sexual abuse. In the total group of patients, the mean age of the sexually abused patients (Group I) was not significantly different from the not sexually abused patients (Group II) (43.7 vs. 48.1 ; $p= 0.106$).

The type and frequency of sexual abuse are listed in Table 2. The type of abuse could not be determined in 23.8% of the abused patients (10/42). Questions

regarding sexual abuse were added in a follow-up version of the PeIFIs. In an earlier version sexual abuse was not specified by the patient, pelvic floor clinician or documented in the patients' medical record by the referring physician. In the sexually abused group 7.2% (3/42) of the patients had complaints in one domain of the pelvic floor vs. 17.5% (25/143) in the nonabused group. Differences in two and three domains are 9.5% (4/42) in the abused group vs. 34.2% (49/143) in the nonabused group, and 83.3% vs. 48.3% (69/143), respectively ($p < 0.0001$) (Table 3).

Table 1: Specification of complaints in the three domains of the questionnaire.

Urological Domain	Gastro-intestinal Domain	Sexual Domain
Urgency / frequency	Frequency	Dyspareunia
Hesitation	Blood loss	
Weak urinary stream	Inappropriate emptying	
Intermittent urinary stream	Defecation in tempi	
Straining when urinating	Straining	
Residual awareness	Peri-anal skin complaints	
Urinary tract infections	Soiling	
Painful voiding	Incontinence of stool or flatus	
	Peri-anal pruritus	
	Painful emptying	

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Table 2: Frequency and percentage of reported sexual abuse.

Type of abuse	N	%
Incest	11	26,2
Sexual intimidation	4	9,5
Rape	3	7,2
Marital rape	9	21,4
Sexual harassment	5	11,9
Unknown	10	23,8
Total	42	100.0

Table 3: Number of domains with complaints of patients with or without sexual abuse.

Domains	Group I (Abused +)	Group II (Abused -)	n	p-value
1	3 (7.2 %)	25 (17.5 %)	28 (15.1 %)	
2	4 (9.5 %)	49 (34.2 %)	53 (28.7 %)	
3	35 (83.3 %)	69 (48.3 %)	104 (56.2 %)	
Total	42 (100 %)	143 (100%)	185 (100%)	<0.001

Domains: number of domains of the pelvic floor with complaints

Abused +: number of patients with a history of sexual abuse

Abused -: number of patients without a history of sexual abuse

DISCUSSION

A sexual abuse prevalence of 23% at our outpatient academic pelvic floor center is comparable to earlier published data, in which a prevalence of 4 - 38% has been described (3;17-24). Kellogg reported a child sexual abuse prevalence of 12 - 25% (1). In a prevalence study in a gynecologic outpatient clinic of a large urban teaching hospital, Peschers et al. reported that one fifth of the patients (20.1%) had been forced to engage in sexual activities (21).

Many studies have shown that sexual abuse might lead to a variety of symptoms in one domain of the pelvic floor (3-6;9-11;17;21;22;25-30). To our knowledge, this is the first publication about the relationship of complaints of micturition, defecation and sexual dysfunction related to the pelvic floor dysfunction and a history of sexual abuse. Our study demonstrated a significantly higher rate of sexually abused women with complaints in the three domains of the pelvic floor compared to women with complaints in fewer domains. One of the limitations of this study is that we only included dyspareunia as a sexual dysfunction issue. In 2005 the Pelvic Floor Clinical Assessment Group of the International Continence Society described the domains of the pelvic floor including also pelvic pain and pelvic organ prolaps (31). Our study was started in 2004, so we did not include pelvic pain and a more specific definition of sexual dysfunction. Nor did we specify the type of sexual behavior that occurred during the abuse in genital penetration vs. touch or forced oral sex. Another limitation of our study is that our sample is self-selected. Therefore more patients with complaints of micturition, defecation and/or sexual dysfunction related to the pelvic floor dysfunction can be found in our research population. We believe that if this study would be performed in a urological, gynaecological, gastroenterological, or surgical outpatient office, the difference may be even more significant, because the probability of selection is much lower.

The fact that only 28 out of 185 of the women had only a single complaint could indicate that having only a single complaint is rare. We believe that this is the result of a selection bias, because referrers think of a pelvic floor dysfunction sooner in patients with multiple pelvic floor complaints. Certainly, we have not demonstrated that women with pelvic floor problems have a higher prevalence of sexual abuse than women in the general population, based on our small self-selected sample. Another limitation is that instead of studying two large cohorts, one of sexual abused women and non abused controls, and then looking at pelvic floor domains, we used two groups which are already a pathological sample — women who went to a pelvic floor clinic with at least one pelvic floor problem. There is no real control group since both groups have already pathology.

Women forced to engage in oral sex with a perpetrator may have very different sexual problems compared to women who had forced intercourse. Additionally, a

sexual abuse experience that includes fondling is very different from a sexual abuse that includes intercourse, and can have a different impact for the functioning of the pelvic floor. So, analyzing sexual abuse as a homogenous experience can influence the outcome of the study. The importance of discussing abuse before performing a gynaecological examination is clear. Survivors of sexual abuse rated the gynaecological care experience more negatively than the controls, experienced more intensely negative feelings, and reported being more uncomfortable during almost every stage of the gynaecological examination than the controls. Survivors also reported more trauma-like responses during the gynaecological examination, including overwhelming emotions, intrusive or unwanted thoughts, memories, body memories, and feelings of detachment from their bodies (32-36). Physicians should also consider that any kind of gynaecological examination in these women may trigger a flashback of the primary situation and retraumatize the concerned women (37). Farley et al. demonstrated a decreased probability of screening for cervical cancer at women who have been sexually abused, indicating that women who have been sexually abused tend to avoid routine gynaecological care (38). The clinical significance of the findings in this study suggests that a holistic view is needed in the treatment of pelvic floor dysfunction treatment and all domains need to be assessed in a questionnaire as early as possible during history taking, as was already described by Devroede (39). A hypothesis for complaints in more domains in the abused group could be that they are related to a general pelvic floor disorder. This disorder is probably related to a overactive rest tone of the pelvic floor (15;40).

For example, Leroi et al. reported that patients with a history of sexual abuse have a significantly more disturbed anorectal motility and a increased resting pressure at the lower part of the anal canal compared to non-abused patients with anismus (7).

The pelvic floor comprises several layers: from superficial to deep, the supportive connective tissue of the endopelvic fascia, the pelvic diaphragm (levator ani and coccygeus muscle), the perineal membrane (urogenital diaphragm) and the superficial layer (bulbospongiosus, ischiocavernosus and superficial transverse perineal muscles) (12;40). The iliococcygeus, pubococcygeus, and puborectal muscles make up the levator ani muscle and play an important role in prevention of pelvic organ prolapse and incontinence. The perineal membrane is a fibrous muscular layer directly below the pelvic diaphragm. The current concept is that the muscular contents of this layer are formed by the distal part of the external urethral sphincter muscle (compressor urethra and urethrovaginalis part of the external urethral sphincter). The bulbospongiosus and ischiocavernosus muscles of the superficial layer also have a role in sexual function, while the superficial transverse perineal muscle has a supportive role. Pelvic floor muscle contraction presumably involves contraction of these muscles groups (41-43). We conclude that

sexual abuse survivors may have a dysfunction of the aforementioned muscles, giving rise to urological complaints, gastro-intestinal complaints and/ or sexual dysfunction. Perhaps pelvic floor hypertonus may be related to state or trait anxiety, developed as a holding pattern or defense mechanism. However, there is no literature to support this idea. This issue should be explored further in the future, and investigators should assess and describe their findings in both women and men, with pelvic floor dysfunction and sexual abuse, in relation to complaints of micturition, defecation, sexual dysfunction and/or pelvic pain syndrome.

CONCLUSIONS

Twenty-three percent of the female patients in a pelvic floor center reported a history of sexual abuse. In our sample, patients with multiple pelvic floor complaints related to pelvic floor dysfunction are more likely to have a history of sexual abuse than patients with isolated complaints. Further research is needed to assess the impact of pelvic floor dysfunction and sexual abuse in relation to complaints of micturition, defecation and/or sexual dysfunction.

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