Persistent Sexual Arousal Syndrome Associated with Increased Soy Intake

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ABSTRACT

Introduction. Persistent sexual arousal syndrome is an uncommon sexual complaint. Patients with this disorder can be distressed by the escalation of tension in the pelvic region and the prevailing necessity to diminish the pressure by self-stimulation. Patients frequently suffer from guilt or shame and often do not seek medical care. There are many potential causes of this disorder; however, a definitive etiology has yet to be elucidated.

Case. The patient is a 44-year-old female who presented to her gynecologist for evaluation of dysmenorrhea and menometrorrhagia. During the review of systems, the patient reported 5–6 months of increased pelvic tension, not associated with an increase in desire that required her to self-stimulate to orgasm approximately 15 times daily. Upon further inquiry, the patient disclosed that her dietary regimen included soy intake in excess of 4 pounds per day that began approximately 1 month prior to the onset of symptoms.

Results. Treatment consisted of supportive counseling and dietary modification. At the 3-month follow-up visit, the patient's menstrual difficulties and sexual complaints resolved.

Conclusions. Although no known cause or cure of persistent sexual arousal syndrome has been identified to date, the success of reducing dietary of phytoestrogens in this patient may provide insight into the etiology of the disorder and suggest potential treatments.

Key Words. Female Persistent Sexual Arousal Syndrome; Female Causes and Treatment of Orgasmic Disorders; Female Modification of Reversible Causes

Background

Persistent sexual arousal syndrome (PSAS) is defined as feelings of spontaneous, persistent, and intense genital arousal in the absence of sexual desire and/or genital stimulation [1]. It is a rare complaint that can impact a patient's activities of daily living and social functioning by the escalation of tension in the pelvic region and has a prevailing necessity to diminish the pressure by self-stimulation. Symptoms often do not subside even after orgasm is achieved [2]. Patients with PSAS have feelings of physiological arousal and genital vasocongestion without desire that can persist for extended periods of time and often do not diminish with self-stimulation and orgasm. And unlike hypersexuality where levels of desire are increased, patients with PSAS have excessive pelvic throbbing or pressure independent of desire [3].

Case

The patient is a 44-year-old, gravida 9, para 5 female with a history of a low-grade intraepithelial lesion of the cervix treated with a cone biopsy in 1995, who presented to a sexual medicine program for evaluation and treatment of dysmenorrhea, hypermenorrhea, and polymenorrhea that began 5–6 months prior to her presentation. Other rele-

vant history includes a leiomyomatous uterus with a dominant 9 cm right lateral leiomyoma that had been stable via pelvic ultrasound over a 3-year period, two dilation and curettages revealing a benign secretory endometrium in both 2001 and 2003, a negative endometrial biopsy performed by the patient's regular gynecologist 1 week prior to presentation showing again a benign secretory endometrium, and menstruations lasting 7–10 days with excess menstrual flow during the first 5 days. She denied ever using oral contraceptives, infertility medications, or other hormonal therapies.

Upon review of systems, the patient reported 5–6 months increased pelvic congestion and consistent increased "pressure in the genitals with the need for self-stimulation to orgasm approximately 15 times per day." The patient described that several times during the day she had to interrupt her social and professional commitments mid-task to "relieve the tension in her pelvic region." She denied any genitourinary complaints or bladder discomfort. She was markedly distressed with this behavior because self-simulation was impacting her professional and educational responsibilities. The patient desired treatment for this sexual complaint; however, she was extremely concerned that the sexual medicine professionals should "not fix her too much." Finally, during a routine dietary survey the patient disclosed that her daily soy intake was in excess of 4 pounds consumed daily and her diet was almost exclusively soy-based. She stated that she began this diet approximately 1 month prior to the onset of her symptoms and that she had no particular reason or goal for doing so.

Physical examination was significant for scarring on the cervix that was consistent with prior conization, and a 15-week-sized fibroid uterus, which was palpable on both abdominal and pelvic examination. The adnexa were not assessable due to increased uterine size. The vulva, vagina, rectum, and Pap smear were unremarkable. Baseline laboratory values for serum lutenizing hormone (LH) and follicle stimulating hormone (FSH) were within normal limits.

Results

Treatment consisted of dietary modification and supportive counseling. The patient declined any medical or surgical treatment for her leiomyomatous uterus because she was concerned about the possible impact on sexual functioning. At a 3-month follow-up visit, the patient had maintained a diet with limited soy products and reported that she was no longer consumed with relieving her distressing pelvic throbbing and she was engaged in satisfying sexual activity only twice daily. In addition, her menstrual complaints of dysmenorrhea, hypermenorrhea, and polymenorrhea had completely resolved.

Postintervention laboratory evaluation was remarkable only for a mildly elevated sex hormone binding globulin (SHGB) and microcytic anemia. All other indices, including a lipid profile, thyroid stimulating hormone (TSH), prolactin, dehydroepiandrosterone sulfate (DHEA-S), LH, FSH, and an age-appropriate serum-estrogen and testosterone profiles, were within normal limits (Table 1).

Table 1 Laboratory values

Laboratory test	Pre-evaluation results	Postevaluation results	Normal values
WBC		4.4	4.0–11.0 K/mcL
HGB		9.7 low	11.5–16.0 g/dL
HCT		32.1 low	34–46%
MCV		74 low	82–98 gL
Platelets		429 high	160–400 K/mcL
Total cholesterol		199	<200 mg/dL
TSH		2.16	0.37–4.42 mcU/mL
Prolactin		7.7	3.0–25.0 ng/mL
DHEA-S		94	19–210 mcg/dL
Estrone		44	15–200 pg/mL
Estradiol		65	51–219 pg/mL
LH	12.5	21.5	30–210 pg/mL
FSH	3.4	9.1	7–20 pg/mL
Testosterone		21	0–80 ng/dL
Free testosterone		1.7	0.6–6.8 pg/mL
% Free testosterone		0.8	0.4–2.4%
SHGB		107 high	30–95 nM/L

WBC = white blood cell; HGB = hemaglobin; HCT = hematocrit; MCV = mean cell volume; TSH = thyroid stimulating hormone; DHEA-S = dehydroepiandrosterone sulfate; LH = lutenizing hormone; FSH = follicle stimulating hormone; SHGB = sex hormone binding globulin.

Discussion

Patients with PSAS resist seeking medical care for the disorder due to guilt or shame [1]. When treatment is sought, total curative interventions are often not desired. Some success has been reported with cognitive therapy focused on sexual response [4]. Traditionally, pharmacologic management has consisted of oral contraceptives, anxietolytics, antidepressants, antiandrogens, anesthetic gels, or a combination thereof. To date, no agent has been universally curative likely because no obvious physiologic etiologies have been identified [2].

Because baseline laboratory values prior to the patient's visit to the sexual medicine program were not obtained, changes in serum hormone levels could not be assessed. However, it can be hypothesized that the excess exogenous estrogens from soy phytoestrogens bound and stimulated hormone receptors. Thus, the influence on the vascular integrity of target tissues such as the endometrium, vagina, and clitoris may have led to the patient's sexual symptomology and menometrorrhagia.

This is the first case of PSAS that has been successfully treated with dietary modification. Hormonal and/or dietary factors have not been historically identified to cause this disorder; however, the success of reducing dietary of phytoestrogens in this patient may provide insight into the etiology of the disorder and suggest potential treatments. More formal research is needed to further elucidate this interesting sexual syndrome.

References

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