Vulvar Vestibulitis Syndrome and Estrogen Dose of Oral Contraceptive Pills

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ABSTRACT

Introduction. Vulvar vestibulitis syndrome (VVS) is a diverse, multifactorial phenomenon. Its precise etiology is unknown.
Aim. To define the association between oral contraceptive (OC) estrogen dosage and VVS.
Methods. Women diagnosed as having VVS participated in the study.
Main Outcome Measures. Data on type and usage of oral contraceptive pills (OC) were obtained by a questionnaire, and they were compared for the data on OC usage in the general population.
Results. Available commercial data on Israeli women taking OC showed that 51% of them use low-dose estrogen (≤20 μg) OC and 49% use higher-dose estrogen (30–35 μg) OC. Of the 132 women in the study, 86 (65%) used OC: 68 (79%) used low-dose estrogen OC ($P < 0.002$ compared to the general population), while only 18 (21%) used high-dose estrogen OC ($P < 0.002$ compared to the general population).
Conclusion. Significantly more patients who are treated in our clinic for VVS use low-dose estrogen than those who use high-dose estrogen OC. **Greenstein A, Ben-Aroya Z, Fass O, Militscher I, Roslik Y, Chen J, and Abramov L. Vulvar vestibulitis syndrome and estrogen dose of oral contraceptive pills. J Sex Med 2007;4:1679–1683.**

Key Words. Vulvar Vestibulitis Syndrome; Oral Contraceptive Pills; Estrogen

Introduction

Vulvar vestibulitis syndrome (VVS) is a diverse, multifactorial phenomenon which is one of the most common causes of dyspareunia in women. Its precise etiology is unknown, with biological, psychosexual, and interpersonal relation factors having been proposed as possible causes [1]. VVS is characterized by painful sensations in the vestibule and the surrounding tissue, or by a painful response to a stimulus that is not characteristically painful, such as during sexual intercourse upon vaginal penetration [2].

The association between VVS and oral contraceptive (OC) use was reported in Swedish women diagnosed with VVS who had used OCs for a significantly longer period than did their healthy peers [3]. The relative risk of VVS was also related to some aspects of sexual and reproductive history, such as age at the beginning of OC usage. Bazin et al. reported that the relative risk for VVS in Canadian women who had begun to use OCs early in life (i.e., before the age of 17 years) was higher than for those who had never used OCs [4].

The aim of the present study was to determine whether there is an association between the estrogen dose in the OC used and the likelihood of VVS.

Materials and Methods

Women diagnosed as having VVS lasting for at least 6 months between 2002 and 2004 participated in the current study which was approved by the local Helsinki committee. Patients with other coexisting vulvar/vaginal conditions were excluded, as were women who had undergone prior surgery for VVS. All study participants

Table 1 Distribution of the replies to the questionnaire (N = 86)

Question	Percentage of women responding "yes"		
Number of patients	High-dose OC (N = 18)	Low-dose OC (N = 68)	*P*
Pain only on penetration	17	32	0.07
Nonprovoked pain	13	22	0.08
Pain during tampon insertion	32	50	>0.05
Pain during sex without penetration	73	90	0.07
Recurrent vaginal infections	70	68	>0.05
Recurrent urinary tract infection	48	43	>0.05
Nocturnal enuresis	2	3	>0.05
Family history of pain on penetration	8	18	0.08
Lower urinary symptoms	48	43	>0.05
Irritable bowel symptoms	21	35	>0.05
Sexual trauma in the past	19	17	>0.05
Lower pain threshold	40	0	<0.05
Decreased libido	57	54	>0.05
Fear of penetration	48	53	>0.05
Involuntary pelvic muscle contraction	86	80	>0.05
Decreased lubrication	62	51	>0.05
Effect on relations with partners	30	33	>0.05
Avoidance of intimate encounters with partners	60	65	>0.05
Lower self-esteem and poorer body image	48	50	>0.05

OC = oral contraceptive.

underwent a gynecological examination by a senior gynecologist (L.A.) who followed the recommendations of Davis et al. [5]. Diagnosis of VVS was based upon pain with penetration during vaginal intercourse, tenderness of the vestibular area upon even light touch with a cotton applicator, and/or erythema of the vestibular area [6]. The enrollees complained of introital dyspareunia that prevented pain-free vaginal intercourse. They filled in a questionnaire together with one of the sex therapists during the first intake visit which lasted around 45 minutes. The items included demographics (age, education) and medical (including parity and duration of VVS) and sexual history, as well as usage and type of OCs. The severity of VVS-associated pain was scored on a 10-point Likert scale (10 = most severe pain). The questions on the occurrence of pain and on relevant associated factors were given yes/no answers (Table 1). The study entrants were divided into two groups: one taking OC with a lower dose (≤20 μg) of estrogen and another taking OC with a higher dose (30–35 μg) of estrogen.

Data on the use of OC pills in the fertile-age population in Israel were obtained from representatives of pharmaceutical companies.

Data were analyzed using Student's *t*-test and the χ^2 test where appropriate.

Results

During the study period, 132 women were diagnosed as having VVS at our institution and the 86 of them who had used OCs ≥6 months were enrolled into the study. Their average age was 26 years (range 18–42). Seventeen patients had given birth, and most had finished high school (95%). Sixty-eight (79%) women used a low-dose estrogen OC while only 18 (21%) used a high-dose estrogen OC (Figure 1). None of the women in the low-dose estrogen OC reported low pain threshold, while in the high-dose estrogen OC 40% reported having low pain threshold. There was no significant difference between these two groups in terms of the various demographic, medical, and sexual data.

Most (92%) of the women complained of pain for a duration of ≥6 months (8% for 6 months). The average pain severity for the entire cohort was 7.5 on a scale of 10. The women's replies to the study questionnaire are given in Table 1. All women had more than four complains.

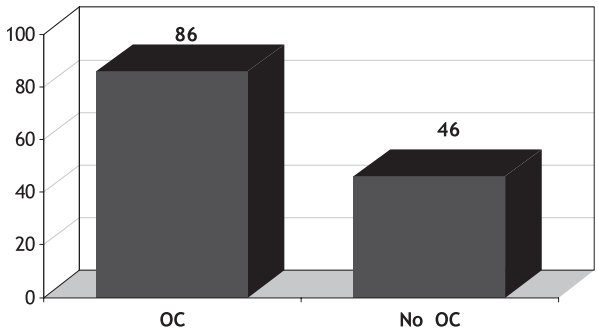

Figure 1 Distribution of oral contraception (OC) use among women with vulvar vestibulitis syndrome (number of women).