

GENERAL GYNECOLOGY

Assessment of vulvodynia symptoms in a sample of US women: a prevalence survey with a nested case control study

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OBJECTIVE: Vulvodynia is a chronic pain syndrome of unknown origin with scant data on frequency. This study assessed the prevalence of vulvodynia symptoms in a sample of US women and compared health characteristics of symptomatic and asymptomatic women.

STUDY DESIGN: A phone survey contacted 2127 US households to identify 100 symptomatic women, who were matched on age and time zone to 325 asymptomatic controls. Odds ratios (ORs) and logistic regression were used to model associations between pain, medical conditions, and health care utilization variables.

RESULTS: Current vulvar pain of at least 6 months duration was reported by 3.8% of respondents, with a 9.9% lifetime prevalence. Forty-five percent of women with pain reported an adverse effect on their

sexual life and 27% an adverse effect on their lifestyle. Cases more frequently reported repeated urinary tract infections (OR, 6.15; 95% CI, 3.51-10.77) and yeast infections (OR, 4.24; 95% CI, 2.47-7.28). Associations existed with chronic fatigue syndrome (OR, 2.78; 95% CI, 1.33-6.19), fibromyalgia (OR, 2.15; 95% CI, 1.06-4.36), depression (OR, 2.99; 95% CI, 1.87-4.80), and irritable bowel syndrome (OR, 1.86; 95% CI, 1.07-3.23).

CONCLUSION: Lifetime chronic vulvar pain was less prevalent in this national sample of women than previous data suggest and was correlated with several comorbid chronic medical conditions and substantial reduction in self-reported quality of life.

Key words: chronic pain, prevalence, vulvar pain, vulvodynia

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Vulvodynia is a chronic lower genital tract pain syndrome of unknown origin characterized by vulvar rawness, burning, and/or stinging.¹ Diagnosis is based on excluding other causes of pain, and associated pelvic disease is limited to vulvar erythema. The lifetime prevalence of this condition has been reported as high as 28% in the adult population, although population-based studies are limited.²⁻⁶ Current literature supports associations between vulvodynia and fibromyalgia, chronic fatigue syndrome,⁷

pain with first tampon use,⁴ yeast infections,^{4,7} recurrent vulvovaginal infections,^{4,7-10} irritable bowel syndrome,⁷ interstitial cystitis,¹¹ and oral contraceptive use.¹² The burden imposed on the health care system by vulvodynia has yet to be well characterized. A Gallup survey indicated that \$882 million are annually spent on chronic pelvic pain, with up to 15% of women missing work and 45% experiencing diminished work productivity because of gynecologic pain.¹³

This national telephone survey ascertained the prevalence and impact of self-reported chronic vulvar pain consistent with symptoms of vulvodynia¹⁴ in a sample of English-speaking US women. A case-control study was nested within this survey to compare health histories of symptomatic women with those without symptoms.

MATERIALS AND METHODS

Over a 4-month period, a sample of US households was screened by telephone to identify 100 English-speaking women with symptoms of vulvodynia. Subjects were matched to 325 asymptomatic women for inclusion in the case-control portion of the study. Sample size was determined by using estimates of a 15% to 18% prevalence of vulvodynia.^{3,5} Participants answered a 30-minute questionnaire that assessed demographics, medical history, and health care use. Symptomatic women also provided a pain history. Approval for the study was obtained from both the University of Medicine and Dentistry of New Jersey Institutional Review Board and Independent Research Consulting. The

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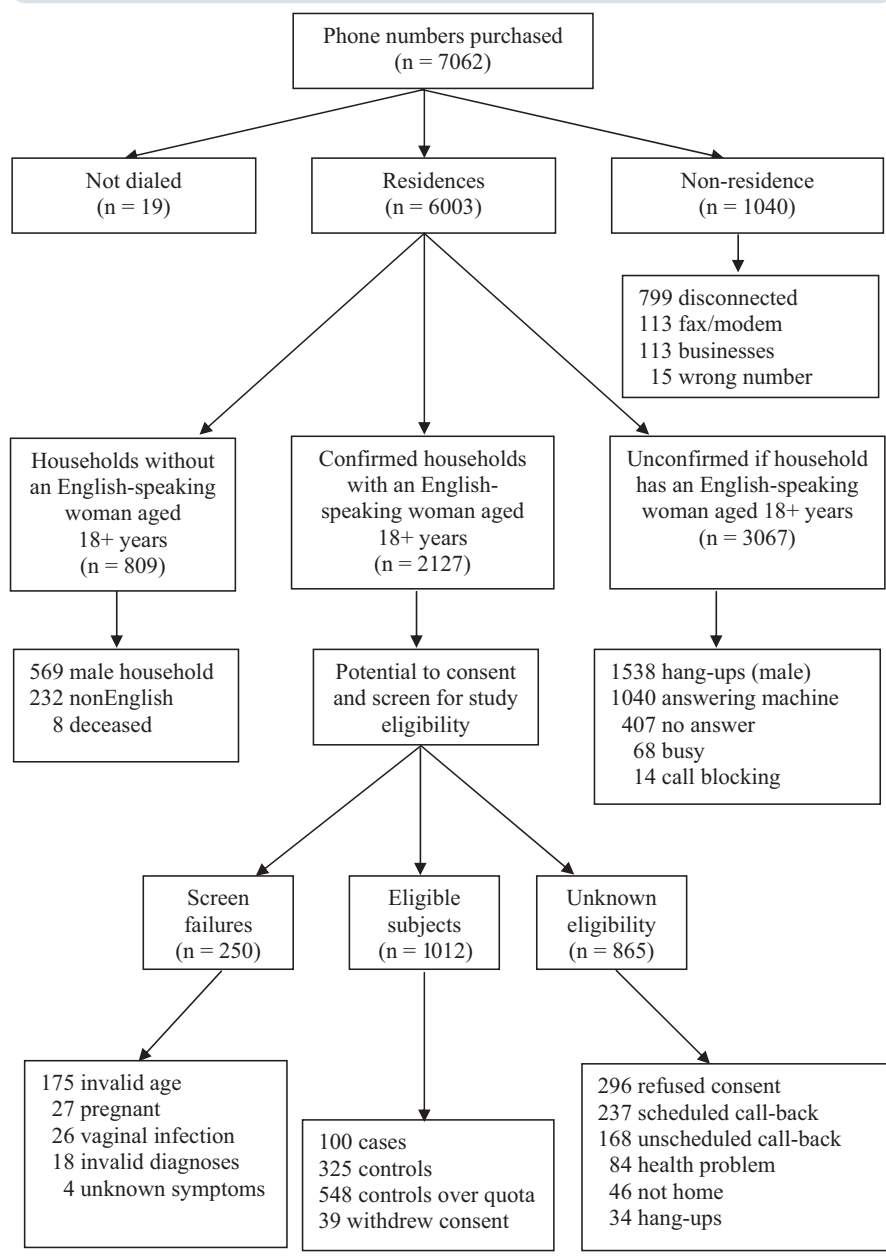
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FIGURE

Calling disposition of 7062 US phone numbers



Henne Group, a survey research organization with expertise in sexual behavior interviewing studies, pretested the survey and implemented the final questionnaire by using a listed sample of US household telephone numbers and a Computer Aided Telephone Interviewing system.

Households were screened for English-speaking females aged 18 and older; if multiple adult women resided in the home, the one with the most recent birthday (month/day, not year) was identified. Verbal con-

sent was obtained, and potential subjects were screened for eligibility; those who met inclusion criteria received the full questionnaire. Women were excluded if they were pregnant, outside the 18-80 year age range, and/or reported an active sexually transmitted infection or active vulvovaginal infection. Women who reported genital pain as the result of ovarian cysts, uterine fibroids, cancer, and/or a sexually transmitted disease also were excluded. Those who self-identified with the 2000 International Society for the Study of Vulvo-

vaginal Disease description of vulvodynia¹⁴ with symptoms lasting for 6 months or longer were classified as cases. The survey continued until 100 cases were identified. Controls were selected as 325 asymptomatic women frequency matched to cases according to age (18-24, 25-34, 35-44, 45-54, 55-64, and 65-80 years) and the 4 continental US time zones. Response and cooperation rates were calculated according to American Association for Public Opinion Research (AAPOR) definitions.

Statistical significance was set at the 5% level. Putative causal variables that were significant in the univariate analysis were entered into a (stepwise) logistic regression model. Although subjects were frequency matched on age, control-to-case matching ratios were higher in the youngest and oldest age groups. Therefore, age was recategorized into 3 groups and included in regression models to investigate the potential effect of age in the model. SPSS 11.0 (SPSS, Inc, Chicago, IL) was used for all analyses.

RESULTS

From a listed sample of 7062 phone numbers, 2127 households were identified in which an adult English-speaking female resided. The study was explained to 1558 (73%) women, and 81% (n = 1262) consented to participate. Of the 1012 women who met inclusion criteria, 3.85% (n = 39) withdrew consent for participation (Figure). Using AAPOR guidelines, a cooperation rate of 91.6% was obtained, indicating the proportion of eligible cases (after screening) that were interviewed.

Of the 1012 eligible women, 100 (9.9%) reported vulvar symptoms consistent with vulvodynia. This population yielded a 3.8% (n = 38) current prevalence of chronic vulvar pain, defined as symptoms within the 6 months preceding the survey. Leading pain descriptors included burning (67%), itching (55%), and aching (43%). Women primarily believed their symptoms were caused by stress (39%) and yeast infections (35%). Common exacerbating factors included sexual intercourse (69%), premenstrual (42%), detergents and soaps (37%), toilet paper (35%), and tampons (34%).

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