ORIGINAL RESEARCH—WOMEN'S SEXUAL HEALTH

Do Women with Female Ejaculation Have Detrusor Overactivity?

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ABSTRACT

Introduction. Questionnaire surveys suggest that 40–54% of women have experienced an expulsion of fluid at orgasm. Some of these women have coital incontinence, whereas others identify the fluid passed as female ejaculate.
Aim. To assess whether women who have experienced female ejaculation have detrusor overactivity or the bothersome lower urinary tract symptoms associated with coital incontinence.
Methods. We recruited six women who self-identified as having experienced female ejaculation and six controls who had not. Each woman completed a 3-day bladder diary and two validated bladder questionnaires: the Urgency Perception Scale (UPS) and the Incontinence Impact Questionnaire (IIQ). Each woman underwent short provocative ambulatory urodynamics, a modified form of urodynamics, with a high sensitivity for detrusor overactivity.
Main Outcome Measures. Prevalence of detrusor overactivity, 24-hour urinary frequency, IIQ and UPS scores.
Results. No woman in either group had detrusor overactivity. The bladder diaries and questionnaire results were within the normal range for all women.
Conclusion. Women who experience female ejaculation may have normal voiding patterns, no bothersome incontinence symptoms, and no demonstrable detrusor overactivity. Women who report female ejaculation, in the absence of other lower urinary tract symptoms, do not require further investigation, and may be reassured that it is an uncommon, but physiological, phenomenon. **Cartwright R, Elvy S, and Cardozo L. Do women with female ejaculation have detrusor overactivity? J Sex Med 2007;4:1655–1658.**

Key Words. Sexual Behavior; Coitus; Orgasm; Ejaculation; Urinary Incontinence; Humans; Female; Detrusor Overactivity; Urodynamics; Sexuality

Introduction

Questionnaire surveys suggest that 40% to 54% of women have at some time experienced an expulsion of fluid at orgasm [1,2]. References to female ejaculation can be found in a variety of Indian texts dating back as far as the 11th century [3]. In the 1950s, Dr. Ernst Gräfenberg reported that stimulation of an area in the anterior vaginal wall (later to be known as the "G-spot") could lead to discharge of fluid from the urethra [4]. Dr. Beverly Whipple and other researchers repopularized this idea in the 1980s, reporting that a minority of women passed small volumes of fluid during heightened sexual arousal or at orgasm [5].

Although it is anatomically and physiologically plausible that small volumes of fluid might be expelled from the para-urethral Skene's ducts, some sources imply that it is a normal part of female sexuality to discharge large volumes of fluid at orgasm. Female ejaculation "evangelists" now teach women who have not previously ejaculated how to "unlock the feminine fountain" using classes and "self-help" books [6]. Pornographic films that purport to show female ejaculation have added to the confusion. Many such films are produced each year, depicting large volumes of fluid expelled from the urethra under high pressure. The most anatomically and physiologically plausible explanation is that such fluid is emitted from the bladder.

Perhaps because of these misleading depictions of female ejaculation, it remains controversial whether the fluid passed contains vaginal secretions, urine, or a mixture of the two [7]. There are trials over the last 25 years with conflicting results. Many trials have only small sample sizes, and some of the research is not peer reviewed. Some biochemical studies analyzing samples of ejaculate have identified raised levels of prostatic acid phosphatase that would not be expected in urine [8]. cexpelled fluid and urine [9]. Some evidence comes from an experiment in which seven women who had regularly experienced female ejaculation were catheterized during sexual arousal [10]. For all participants, large volumes of fluid were passed down the urethral catheter, with the timing of fluid expulsion corresponding with the peak of orgasm.

In our own urogynecology practice, we often treat women with coital incontinence. This is a distressing complaint, which women are reluctant to volunteer [11]. A previous urodynamic study has demonstrated that orgasm may provoke an uninhibited detrusor contraction, causing synchronous leakage [12]. Consistent with this finding, women who complain specifically of incontinence at orgasm have a high prevalence of detrusor overactivity [13]. The symptoms associated with detrusor overactivity include not only coital incontinence, but also bothersome urinary urgency, urge incontinence, urinary frequency, and nocturia.

As cultural awareness of female ejaculation has grown, we have treated a number of women, with a proven urodynamic diagnosis of detrusor overactivity, who rationalized their urinary leakage at orgasm as female ejaculation.

Based on this anecdotal observation, we wanted to assess whether there was any association between coital incontinence and female ejaculation. Specifically we aimed to discover whether women in the community, who self-identified as experiencing female ejaculation, had clinical or subclinical detrusor overactivity, and whether they had abnormal voiding patterns or related bothersome lower urinary tract symptoms. It was not our intention to stigmatize these women with a pathological diagnosis. Instead we hoped that the results of the study might prove useful in counseling women who present with leakage at orgasm. As a secondary benefit of the study, we hoped it would shed light on the physiological mechanisms underlying female ejaculation.

Subjects and Methods

Ethical approval for the study was obtained from our institutional Research Ethics Committee. Six women who self-identified as having experienced female ejaculation were recruited from among the staff at our institution, alongside six controls who had never experienced this phenomenon. Participants were aged between 21 and 47, with parity ranging between 0 and 3. To assess the nature of the participants' ejaculatory experience, we devised a short questionnaire asking about the frequency and associated conditions of their ejaculation. All women in the female ejaculation group had experienced ejaculation "often" or "sometimes." These women reported that ejaculation occurred either with masturbation or during coitus.

Each woman completed a 3-day bladder diary, documenting the timing and volume of each urinary void. Each woman also completed two validated bladder questionnaires: the Urgency Perception Scale (UPS) and the Incontinence Impact Questionnaire (IIQ-7). The UPS is a single-item symptom questionnaire asking about perception of desire to void [14]. The IIQ-7 is a seven-item incontinence-specific quality of life instrument asking about bother associated with lower urinary tract symptoms [15].

Each woman underwent short provocative ambulatory urodynamics (Figure 1). This is a modified form of ambulatory urodynamics taking place over just 30 minutes. It has been previously validated as having a greater sensitivity for detrusor overactivity than conventional laboratory cystometry [16]. The bladder and rectum were catheterized with microtip pressure transducers, and the bladder was filled rapidly with saline up to the maximum cystometric capacity. The woman was

Figure 1 Ambulatory urodynamic machine.