SCANDINAVIAN JOURNAL OF UROLOGY
2020, VOL. 54, NO. 1, 86–88
https://doi.org/10.1080/21681805.2019.1704861

CASE REPORT

Postorgasmic illness syndrome: potential new treatment options for a rare disorder

Hudson Pierce, Jonathan Fainberg, Christopher Gaffney, Ahmad Aboukhashaba, Aleem Khan and James Kashanian

Department of Urology, Weill Cornell Medicine-New York Presbyterian, New York, NY, USA

Introduction

Postorgasmic illness syndrome (POIS) is a rare postejaculatory disorder first described by Waldinger and Schweitzer in 2002 [1]. In their seminal case report, they described two men experiencing rapid onset of a number of flu-like symptoms after orgasm, including extreme fatigue, feverishness, myalgia, and difficulty concentrating. These symptoms appeared within minutes post-orgasm, persisted for 4–7 days, and resolved spontaneously. The men abstained from ejaculation afterward and ceased or diminished sexual activity in order to avoid symptoms.

A handful of case reports have been published since, but POIS remains a rarely diagnosed disorder, and its prevalence and incidence is unknown. Five preliminary clinical diagnostic criteria for POIS were suggested by Waldinger et al. [2] based on a cohort of 45 men, outlined in Table 1. Waldinger et al. [2] further described symptoms in Criterion 1 as belonging to 7 clusters (Table 2). Despite increasing reports detailing this disease, pathophysiology has yet to be fully elucidated. Proposed theories include an autoimmune-allergic mechanism, endogenous μ-opioid receptor system disorder, and cytokine release. Patients have been treated with antihistamines, benzodiazepines, and SSRIs [3], but there is no strong evidence regarding effective management options [4].

POIS has a negative impact on quality of life in these patients beyond the immediate symptoms. It significantly affects relationships as well as sexual and psychological health. It is likely that this debilitating disorder is underreported, given the increase of self-reported cases on the internet over recent years [4], as well as the attribution of symptoms to other causes by providers. Further research into etiology and management of POIS is essential. In this report, we describe a case of POIS. We also hypothesize that symptoms in this patient were related to sympathetic dysregulation, a new theory for potential pathogenesis of this disease.

Case

A 28-year-old man presented with a chief complaint of a lifelong history of postejaculatory symptoms. The patient described myalgia, fatigue, lethargy, and gastrointestinal symptoms beginning immediately after orgasm. He complained of experiencing painful abdominal cramping, diarrhea, bloating with black stools, flatulence, and loss of appetite. He also reported an initial inability to fall asleep independent of time of orgasm followed by intense fatigue and somnolence in the days following orgasm. He reported normally sleeping 8 h per night, but would sleep for periods of up to 14 h after orgasm. He further complained of intense dry mouth and lips with halitosis, and right-sided eye redness and dryness. Aside from the eye symptoms, which resolved after 24 h, his symptoms collectively persisted for up 2 weeks following orgasm. He stated that the severity of his symptoms were directly correlated with the number of orgasms he experienced in succession, increasing in intensity with each orgasm. The symptoms occurred regardless of whether ejaculation was due to masturbation, spontaneous ejaculation, or sexual intercourse. He denies experiencing his symptoms in any other situations. He is single and sexually active with female partners. Although he had not fully abstained from sexual activity and continued to orgasm every few weeks, he experienced marked distress from his symptoms. He did not describe premature ejaculation, reporting an intravaginal ejaculatory latency time of 5–10 min. He also did not have a history of persistent erectile dysfunction, although he did have two recent episodes of difficulty attaining an erection for which he was prescribed tadalafil.

The patient has a history of irritable bowel syndrome (IBS) well-controlled on loperamide. He is otherwise in excellent health with an unremarkable physical examination. Routine laboratory investigation was generally within normal limits. Endocrine investigation revealed mildly decreased testosterone levels and a slightly increased prolactin level, but was otherwise normal: free testosterone 42 pg/mL (ref 47–244 pg/mL), total testosterone 191 ng/dL (ref 300–1080 ng/dL), SHBG 20 nmol/L (ref 11–80 nmol/L), prolactin 13.28 ng/mL (ref 2.60–19 ng/mL), LH 3.19 mIU/mL (ref 1.20–8.60 mIU/mL), estradiol 25 pg/mL (ref $\leq$ 47 pg/mL).

The patient was initially started on a trial of cetirizine, and instructed to orgasm weekly. After 4 weeks, the patient

CONTACT James Kashanian JAK9111@med.cornell.edu Department of Urology, Weill Cornell Medicine-New York Presbyterian, 525 E 68th St, Starr 900, New York, NY 10065, USA

Table 1. Preliminary criteria for diagnosis of POIS [2].

Criterion	
1	One or more of the following symptoms: sensation of a flu-like state, extreme fatigue or exhaustion, weakness of musculature, experiences of feverishness or perspiration, mood disturbances and/or irritability, memory difficulties, concentration problems, incoherent speech, congestion of nose or watery nose, itching eyes
2	All symptoms occur immediately (e.g., seconds), soon (e.g., minutes), or within a few hours after ejaculation that is initiated by coitus, and/or masturbation, and/or spontaneously (e.g., during sleep)
3	Symptoms occur always or nearly always, e.g., in more than 90% of ejaculation events
4	Most of these symptoms last for about 2–7 days
5	Symptoms disappear spontaneously

Table 2. Clusters of POIS symptoms described by patients in Criterion 1 [2].

Clusters	Symptoms
1: General	Extreme fatigue, exhaustion, palpitations, dysarthria, difficulty concentrating, irritability, photophobia/phonophobia, depressed mood
2: Flu-like	Feverishness, perspiration, extreme warmth, chills, flu-like feeling
3: Head	Headache, head feeling full/heavy/foggy
4: Eyes	Burning, blurry vision, eye irritation/itchiness/dryness, watery eyes, conjunctival injection
5: Nose	Sneezing, coryza, rhinorrhea
6: Throat	Sore throat, cough, hoarseness, dysgeusia
7: Muscles	Muscle weakness, myalgia, muscle stiffness, feeling of heavy legs

reported a significant improvement in abdominal cramping and reduction of diarrhea to once per week, but experienced no change in the remainder of his symptoms. Diphenhydramine had no effect on his symptoms. At this time, we suspected his symptoms could be in part secondary to an increased autonomic response, and he was started on a trial of terazosin, followed by several months of alfuzosin. He reported significant improvement of all symptoms on both alpha-blockers. Following ejaculation, bowel movements normalized within two days, with no cramping and only one loose stool. He denied needing prolonged sleep and reported elimination of muscle soreness. His eye dryness and redness improved significantly. The only symptom he reported unaffected by alpha-blockers was his dry mouth and halitosis. Despite these beneficial effects, he decided to discontinue alpha-blockers due to dizziness and significant erectile dysfunction which he attributed to the medications. The patient subsequently self-started a probiotic containing Bacillus coagulans and fructooligosaccharide, which he reported improved his symptoms further.

Discussion

This report describes a patient who presented with symptoms consistent with the diagnosis of POIS utilizing criteria laid out by Waldinger et al. [2]. The patient reported a history of symptoms with close temporal relation to orgasm, exacerbated in severity by number of successive orgasms, and not presenting in any other situation. A trial of antihistamine had good effect on his gastrointestinal symptoms, and alpha-blocker administration resulted in marked improvement of almost all symptoms.

The pathophysiology of POIS is not known. Although symptoms are typically constant in each individual, there is interpatient variability, and it is possible there are may be multiple etiologies for this syndrome. Several hypotheses have been put forth. Waldinger et al. [2] theorized that allergies played a role in POIS, and that symptoms are explained by the patient having an immunogenic reaction to their own semen. They supported this theory in a study of men with POIS who demonstrated positive autologous skin tests to their own semen compared to placebo, and stated that type I and type IV allergic reactions may be involved in producing the symptoms of POIS [2]. They further supported their hypothesis *via* a second study wherein two men underwent successful hyposensitization therapy with autologous semen [5]. However, these studies were limited by lack of controls, and Jiang et al. [6] demonstrated that both an affected patient and healthy controls had positive skin reactions to autologous semen. Waldinger et al. [5] showed that IgE levels were normal in men without atopy, which constituted approximately half of their cohort, and Jiang et al. [6] further demonstrated the absence of seminal-specific IgE levels in the serum of affected or healthy patients. They determined that POIS is not fully explained by an allergic mechanism, and suggested that symptoms are related to dysregulation of endogenous μ-opioid receptors, leading to a state similar to opioid withdrawal following orgasm [6]. Ashby and Goldmeier [7] commented in their case report on the current uncertainty of the exact neurochemical state following ejaculation and orgasm, and proposed that disordered cytokine or neuroendocrine responses may lead to the symptoms of POIS.

Our patient experienced partial amelioration of symptoms on an antihistamine and near complete resolution of symptoms on alpha-blockers, suggesting that POIS is a syndrome driven by the interplay of multiple mechanisms. His significant improvement on alpha-blockers helps to legitimatize our hypothesis that POIS is a result of a post orgasmic sympathetic dysregulation. Orgasm is an exceedingly complex biochemical event, and a complete neurophysiological model remains elusive. In a study looking at orgasm in men with spinal cord injuries (SCI), Courtois et al. [8] theorized that orgasm in able-bodied, healthy men can be modeled as an analogue to autonomic hyperreflexia (AHR). AHR is a clinical pathology seen mostly in patients with SCI, characterized by sympathetic hyperactivity with symptoms similar to the transient effects of orgasm, including hypertension and muscle contractions. Courtois et al. [8] presented data supporting their hypothesis that men with both SCI and AHR experienced more orgasmic sensations than those with SCI and no AHR, and proposed that orgasm in healthy men is an AHR-related event that is normally under spinal control. It is possible that the pathophysiology of POIS is due in part to persistent autonomic dysregulation following orgasm, leading to the collection of symptoms reported by patients. Alpha-blockers are one of the prophylactic management options for AHR [9], and this proposed model for the male orgasm may help explain the marked reduction of symptoms in our patient after administration of terazosin and alfuzosin. It

follows that other pharmacological agents with a reducing effect on autonomic hyperactivity, such as nifedipine, could possibly be viable treatment options in patients with POIS.

The patient also reported improvement of symptoms after taking a probiotic he obtained online, at which time he was not taking an antihistamine or alpha-blocker. The mechanism underlying the beneficial effects of probiotics is poorly understood, but one described effect includes immune system modulation. Although there is no definitive evidence supporting the use of probiotics as a treatment for allergic diseases, and there is considerable heterogeneity between studies, at least one meta-analysis reported a beneficial effect in allergic rhinitis, if not other allergic diseases [10]. Operating under the hypothesis that multiple etiologies account for POIS, one of which is an autoimmune-allergic model, it is possible that a probiotic could have a beneficial effect on symptoms in this syndrome. Dysbiosis of the genitourinary tract may also be a component of the pathophysiology of POIS, but the therapeutic benefit of probiotics remains tenuous even in clinical contexts where the link between microbiotal shift and disease is more established. In keeping with our theory of autonomic dysregulation, it could also be that the probiotic had a modulating effect on a complex interplay of altered neuroendocrine physiology in this patient. Finally, it is currently unclear the degree to which psychological factors may contribute to POIS etiology. The purported efficacy of the probiotic may have been due to a placebo effect, especially given that the patient reported improvement from the probiotic after several prior months of beneficial alpha-blocker use.

This case reports describes a patient with a distinctive collection of symptoms following orgasm, consistent with a diagnosis of POIS. To our knowledge, the use of alpha-blockers to treat this condition have not been reported in the literature. Further research into the neurophysiological model of orgasm and its relation to autonomic arousal may help elucidate the pathogenesis of this condition. POIS is a debilitating and potentially under recognized condition that merits increased attention from providers.

Informed consent

Written informed consent was obtained from the patient for this case report.

Disclosure statement

No potential conflict of interest was reported by the authors.

ORCID

Hudson Pierce http://orcid.org/0000-0001-5540-2419

References

[1] Waldinger MD, Schweitzer DH. Postorgasmic illness syndrome: two cases. J Sex Marital Ther. 2002;28(3):251–255.
[2] Waldinger MD, Meinardi MM, Zwinderman AH, et al. Postorgasmic Illness Syndrome (POIS) in 45 Dutch caucasian males: clinical characteristics and evidence for an immunogenic pathogenesis (Part 1). J Sex Med. 2011;8(4):1164–1170.
[3] Althof SE, McMahon CG. Contemporary management of disorders of male orgasm and ejaculation. Urology. 2016;93:9–21.
[4] Nguyen HMT, Bala A, Gabrielson AT, et al. Post-orgasmic illness syndrome: a review. Sex Med Rev. 2018;6(1):11–15.
[5] Waldinger MD, Meinardi MM, Schweitzer DH. Hyposensitization therapy with autologous semen in two Dutch caucasian males: beneficial effects in Postorgasmic Illness Syndrome (POIS; Part 2). J Sex Med. 2011;8(4):1171–1176.
[6] Jiang N, Xi G, Li H, et al. Postorgasmic illness syndrome (POIS) in a Chinese man: no proof for IgE-mediated allergy to semen. J Sex Med. 2015;12(3):840–845.
[7] Ashby J, Goldmeier D. Postorgasm illness syndrome–a spectrum of illnesses. J Sex Med. 2010;7(5):1976–1981.
[8] Courtois F, Charvier K, Vezina JG, et al. Assessing and conceptualizing orgasm after a spinal cord injury. BJU Int. 2011;108(10):1624–1633.
[9] Krassioukov A, Warburton DE, Teasell R, et al. A systematic review of the management of autonomic dysreflexia after spinal cord injury. Arch Phys Med Rehabil. 2009;90(4):682–695.
[10] Zajac AE, Adams AS, Turner JH. A systematic review and meta-analysis of probiotics for the treatment of allergic rhinitis. Int Forum Allergy Rhinol. 2015;5(6):524–532.