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CASE REPORT

Post-orgasmic illness syndrome: a case report [version 1; peer review: 3 approved with reservations, 1 not approved]

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Abstract

Post orgasmic illness syndrome (POIS) is a newly described syndrome. Manifestations of this syndrome may be physical, cognitive or both. Many theories have been proposed to explain the causes of this syndrome including allergy to seminal components, allergy to unknown proteins released during ejaculation or a psychosomatic etiology. We present a case of POIS with a manifestation of atopy that may be consistent with the allergy hypothesis.

Keywords

Post orgasmic illness syndrome, allergy, ejaculation.

Open Peer Review

Approval Status ? ? ? X

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version 1	?	?	?	X
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1. **Selim Cellek**, Cranfield University, Bedfordshire, UK
2. **Michael Fraser**, Royal Infirmary & Southern General Hospitals, Glasgow, UK
3. **David Goldmeier**, St Mary's Hospital, London, UK
4. **Marcel D Waldinger**, Utrecht University, Utrecht, The Netherlands
Dave H Schweitzer, Reinier de Graaf Groep of Hospitals, Delft-Voorburg, The Netherlands

Any reports and responses or comments on the article can be found at the end of the article.

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Introduction

Post-orgasmic illness syndrome (POIS) was first reported and named by Waldinger and Schweitzer in 2002¹. This recently described syndrome may be more prevalent than one might expect, but has not received much attention and, we think, many cases may be misdiagnosed.

To the best of our knowledge, aside from two cases reported by Waldinger and Schweitzer¹, two by Ashby and Goldmeier², and one each by Dean (personal communication), Mullhal (personal communication) and Ashworth (personal communication), and the self reported cases on the site of the Naked Scientist's discussion forum (www.thenakedscientists.com/forum), no more scientific discussion on POIS exists in textbooks, medical journals, or scientific meetings or congresses.

POIS appears to be principally a male orgasmic disorder, as most of the reported cases are males. Its manifestations start within seconds after orgasm and may continue for 4–7 days. These manifestations differ in their severities but, in most cases they are severe enough to make the patient abstain from the sexual activities; especially ejaculation and orgasm. They are not uniform for each patient and can be grouped based on having a specific cluster of symptoms^{1,2}.

The most commonly reported manifestations are cognitive disorders and flu-like symptoms. The former is described by the patient as including brain fog, with inability to focus, communicate or process information. Some patients may suffer from temporary aphasia, irritability, anxiety, inability to relax and social phobias. The flu-like manifestations are; fever, sore throat, headache, chill, over-sweating with severe muscular, and bone and joint pains to the extent of severe exhaustion and fatigue¹. One patient reported transient memory loss after each orgasm².

Nothing is currently known regarding the underlying etiopathology of POIS, but the presence of manifestations in symptom clusters and absence of uniformity may point to different etiologies of the disease. It has been theorized that an allergic reaction could be responsible¹. Waldinger and Schweitzer stated that during ejaculation and orgasm, many chemicals are released in the blood and an allergic reaction may occur in response to one (or more) of them, causing POIS manifestations. Alternatively, a psychosomatic disorder theory has been proposed by Krishnamurti and Ashoor (personal communications), who stated that these manifestations occur in individuals who believe that loss of vital fluid from the body (i.e. semen) causes weakness. Hypothyroidism (Dean, personal communication), hyperglycemia, hypertension, cortisol depletion, decreased (Dehydroepiandrosterone) DHEA, decreased testosterone, elevated prolactin and disorders of the CNS including alterations in serotonin, catecholamine and endorphin activity, are other suggested theories for this syndrome¹ (Dean, personal communication; Ashworth, personal communication).

There is currently no effective treatment for POIS. Strong analgesics, such as NSAIDs, tramadol HCl and selective serotonin re-uptake inhibitors, taken one hour pre-coital may help some patients but are of no benefit in others^{1,2}.

Case

Here we present a 45 year old Egyptian engineer who had been in a stable marriage for 10 years and had 3 children. Shortly post-orgasm (within 4–5 seconds), he feels severe fatigue, tiredness and exhaustion with severe muscular, bone and joint pains so that opening his hands becomes very painful. The condition is accompanied by headache, a pale face, eye irritation, low concentration, anxiety and dizziness with severe itching. The patient reported that these manifestations started early with puberty and increased in severity with age and occur with all orgasms whatever the type of sexual activity; night emission, masturbation or vaginal ejaculation. These manifestations are so severe that during the first 2 days post-orgasm he can't go to work, though they gradually fade and disappear by the 5th day. The patient abstains from sexual activity, although he has a strong desire and rigid erections. He has no history of chronic diseases, operations or drug intake except for life-long atopic manifestations of bronchial asthma, allergic rhinitis and neurodermatitis and occasionally uses symptomatic treatment to treat these manifestations.

On examination the patient had fair general health, was well built and had complete secondary sex characters. His weight was 97 kg, height was 177 cm and blood pressure was 125/85 mm/Hg.

The results of routine laboratory tests (complete blood picture, renal function, blood sugar and prostatic smear) were all normal. The results of other laboratory tests are shown in Table 1.

The patient received strong analgesics in the form of Ibuprofen (400 mg on demand) and tramadol (50 mg one hour pre-coitally) but there was no reported benefit. A selective serotonin re-uptake inhibitor (escitalopram 10 mg daily at bedtime for 3 months) was also tried with no benefit.

Discussion

The exact etiopathology of POIS is currently unknown. The presentation of symptoms appear in clusters and the differences from one patient to another suggests that there may be more than one cause for this syndrome. Hyperglycemia¹, low cortisol, low testosterone, elevated prolactin (Ashworth, personal communication), hypothyroidism (Dean, personal communication) and low DHEA¹ have all been proposed to explain the etiopathology of POIS. All of these parameters were assessed in this patient and proved to be normal. We believe that the psychosomatic theory, where the belief that loss of vital fluid (i.e. semen) causes weakness, is not applicable to this patient as he is highly educated, successful in his job, has an intact personality

Table 1 Laboratory results of a patient with post-orgasmic illness syndrome.

Test	Patient's result	Normal lab range
Total testosterone (ng/ml)	4.11	2.4–8.3
Prolactin (ng/ml)	13.8	2.5–17
DHEA-S (ug/dl)	86	80–560
Cortisol 9 p.m. (μg/dl)	11.2	2.0–15
Total T ₃ (ng/dl)	129	80–200
Total T ₄ (μg/dl)	8.4	4.5–12.5
TSH (μIU/ml)	1.03	0.30–5
ALT (U/L)*	68	Up to 44
AST (U/L)*	41	Up to 34

* These elevations are due to fatty liver with no viral cause (as determined by PCR & liver ultra-sonography)

DHEA-S: Dehydroepiandrosterone sulfate

T₃: Tri-iodothyronine

T₄: Tetra-iodothyronine

TSH: Thyroid stimulating hormone

ALT: Alanine transaminase

AST: Aspartate transaminase

and a stable marital life. The elevated liver enzymes in this patient are not related to his problem as his POIS manifestations have been present since puberty.

What should be considered in this patient is his life-long atopy, including neurodermatitis. He reported severe itching after each orgasm as one of his POIS manifestations. We believe this

factor to be very interesting, as it may point to and support an allergic etiology¹ in this patient. Previously reported cases did not inquire about or evaluate allergic reactions^{1,2}. As such, we believe that it is very important to re-evaluate these cases and any forthcoming reported ones for any allergic and hypersensitive reactions.

Conclusion

Much more attention to POIS is necessary to avoid misdiagnosis, to determine its exact etiopathology and to identify an effective treatment. A possible association with different allergic reactions is worthy of further investigation and evaluation.

Consent

Written informed consent for publication of clinical details was obtained from the patient.

Author contributions

AMA: performed clinical description, clinical analysis, theory proposal and final revision. HAY: wrote and revised the manuscript. MHA: performed chemical analysis for the blood samples and final revision. All authors agreed to the publication of the manuscript.

Competing interests

No competing interests were disclosed.

Grant information

The authors declare that no grants were involved in supporting this work.

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Open Peer Review

Current Peer Review Status: ? ? ? X

Version 1

Reviewer Report 23 May 2013

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Marcel D Waldinger

Department of Pharmacology, Utrecht Institute for Pharmaceutical Sciences, Utrecht University, Utrecht, The Netherlands

Dave H Schweitzer

Department of Internal Medicine and Endocrinology, Reinier de Graaf Groep of Hospitals, Delft-Voorburg, The Netherlands

We would like to note that we encourage the publication of case reports on Post Orgasmic Illness Syndrome (POIS). POIS was previously recognized and reported by Waldinger *et al.*^{1,2,3} who proposed 5 preliminary criteria, which were extracted from a large study of 45 Dutch males with POIS¹. Moreover, in 2011 Waldinger *et al.* postulated that POIS is caused by an immunological reaction against a man's own semen. This concept was based on a placebo-controlled study amongst 33 men who underwent skin-prick tests with diluted auto-semen¹. The skin prick reaction appeared to be positive in 88%¹. In addition, hyposensibilisation with auto-semen showed to ameliorate POIS symptoms in two men who consented with hyposensibilisation². Notably, Waldinger *et al.* also showed that of all 45 men with POIS 58% had an atopic constitution, suggesting a relationship between an allergic constitution and POIS¹.

Apart from being incomplete in their references (references 1 and 2 are not mentioned in the article of Attia *et al.*), the authors of the current case report quoted the first publication of Waldinger and Schweitzer erratically by mentioning that analgesics, such as NSAIDs, tramadol and SSRIs taken precoital "may help some patients" suggesting that these drugs may be effective in some way to treat POIS. However, in the original description of POIS in 2002, none of these drugs were suggested as being clinically effective to reduce POIS symptomatology. Existence of atopic or allergic conditions remains a cornerstone of POIS and was clearly previously reported in the aforementioned original studies. Therefore, it is ironical and also flawed when Attia *et al.* stated that "previous reported cases did not inquire about or evaluate allergic reactions". We feel obliged to clarify these wrong statements since scientific prudence must prevail particularly in case of claims of new disease concepts.

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3. Waldinger MD, Schweitzer DH: Postorgasmic illness syndrome: Two cases. *J Sex Marital Ther.* 2002; **28** (3): 251-5 [PubMed Abstract](#)

Competing Interests: No competing interests were disclosed.

We confirm that we have read this submission and believe that we have an appropriate level of expertise to state that we do not consider it to be of an acceptable scientific standard, for reasons outlined above.

Author Response 13 Jun 2013

abdalla attia, Minoufiya University, Shibin El Kom, Egypt

Dear Prof Waldinger,

Thank you for your review of this paper. Although we respect your opinion, we are disappointed and surprised at your comments on the article, particularly as you state that you would encourage further publications on POIS.

We discovered our case of POIS at the end of 2009. At this point, there seemed to be only one similar publication (Waldinger & Schweitzer, 2002) on POIS but this did not refer to atopy. We found that our patient was atopic. In addition to the cognitive and body pains he feels post orgasm, his atopy flares up, producing eye irritation and severe body itching. After preparing our first report in December 2009, and before publication, we did try to contact you for your opinion as the sole other reporter of this syndrome but received no response from repeated attempts.

In 2010, we shared this case report at the ISSM forum. To our knowledge, this was before any other published report of atopy in relation to POIS. Many of our colleagues who are ISSM members commented and discussed the case at this forum, one of them being Prof. David Goldmeier. This case report was also presented as a poster at the 20th World Congress for Sexual Health, held in June 12-16, 2011, in Glasgow, UK, and was published in the conference proceedings. On the basis of this history, we suggest that we may have been the first to suggest that atopy may be a precipitating factor for POIS and that this condition should be checked for in any POIS cases.

We would also like to respond to your other comment regarding the use of NSAIDs, tramadol and SSRIs in this condition. The reference to Waldinger *et al.* 2002 in this section is related to the sentence 'There is currently no effective treatment for POIS' and we apologise if this is unclear. We agree that this reference should be corrected so that it is attached to

the correct statement. Our patient did not get any benefits from trying these drugs in contrast to the results of Ashby & Goldmeier (2010).

In regards to testing for allergic reactions, we would like to ask whether you think that the skin prick test is reliable as a diagnostic test for allergy. Is it valid to conclude that POIS patients are allergic to their own semen on the basis of this test and suggest that this is the cause of POIS? We would suggest that skin prick tests can lead to many false positive and negative results. As andrologists we know (and there is a body of evidence for this), that semen is regarded as foreign by the body and the immune system. Immune tolerance to semen is not present. Semen is separated from the immune system by a very competent blood–testis barrier that is formed by the highly efficient Sertoli–Sertoli cell junctional complex. We would suggest that this is not a ‘hypothetical membrane’. In certain known pathological conditions this barrier may be broken. If this occurs, auto-antibodies can form against semen. Thus, if a subject’s own semen is then injected intradermally, a reaction may take place as it is recognized as a foreign antigen. We would suggest that many people would get a positive reaction on the basis of such a prick test even though they do not suffer from POIS. If allergy to the patient’s own semen is a suspected cause of POIS, it will be necessary to measure serum and seminal plasma anti-sperm antibodies; IgA, IgG and IgM, to conduct immuno bead and MAR testing and to report on the patient’s seminogram changes. This might also suggest that POIS patients would be mostly infertile due to formation of anti sperm antibodies.

Given these concerns regarding prick testing, we do not believe that the cause of POIS is allergy to one’s own semen and also have doubts about the use of hyposensitization as a possible treatment.

Competing Interests: No competing interests were disclosed.

Reviewer Report 14 May 2013

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David Goldmeier

Jefferiss Wing, Jane Wadsworth Sexual Function Clinic, St Mary’s Hospital, London, UK

- POIS may start up to a couple of hours after orgasm.
- What is the evidence for an allergic cause in this man- allergy history is very common in the general population?
- If allergy is the cause, have you tried him on high dose levocetirazine prior to orgasm?
- Naked Scientists assert Niacin helpful- did he try it?
- Does he also have chronic fatigue syndrome?

- Why not try a strong non steroidal e.g. diclofenac?
- Does he have POIS if he has sex but doesn't orgasm?

Competing Interests: No competing interests were disclosed.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 15 May 2013

abdalla attia, Minoufiya University, Shibin El Kom, Egypt

Dear **David Goldmeier**, Thanks for your participation.

The following are the explanations for your reservations;

- 1- Yes, POIS may start within a couple of hours after orgasm, however our case and the reported cases mostly start just after orgasm.
- 2- In our case, severe itching and eye irritation, which are some of the atopic manifestations, started just after orgasm each time it occurred.
- 3- Although levocetirizine use is a good idea and we did not try it, it alone seems to be insufficient in relieving atopic symptoms and we estimate the results may be not satisfactory. We tried to use systemic steroids but the patient had refused.
- 4- Niacin did not reach our knowledge at that time to use it, but we think it is worthy enough to try.
- 5- No he has not suffered from chronic fatigue syndrome.
- 6- He tried ibuprofen 400 mg before and after sexual activity, tramadol hydrochloride as we mentioned but with no response. 7- POIS manifestations started in this patient only after orgasm and not sex without orgasm

Competing Interests: No competing interests were disclosed.

Reviewer Report 03 May 2013

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Michael Fraser

Department of Urology, Royal Infirmary & Southern General Hospitals, Glasgow, UK

I find this case report interesting, but no more than that. The clinical entity which has acquired the

acronym POIS is intriguing and for that reason alone worthy of appearing in print to increase awareness of its possible existence. I do feel that a cluster of symptoms does not make for greater interest. I would be fascinated to see someone consider neuroradiologic imaging (PET/MRI) in these subjects.

Competing Interests: No competing interests were disclosed.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 03 May 2013

abdalla attia, Minoufiya University, Shibin El Kom, Egypt

Dear Dr Fraser,

Thanks for your comment. Here in our case, we propose an allergic theory that may correlate between POIS and Atopy. So, we think that PET/MRI may be just wasting money, especially if the patient has these signs and symptoms just after each orgasm, apart, he is completely normal or has signs and symptoms of atopy. Otherwise, these patients may need to be investigated in regard to the issue of atopy to prove or deny our theory.

Thanks,
Abdalla Attia
The author of the case

Competing Interests: No competing interests were disclosed.

Reviewer Report 24 April 2013

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Selim Cellek

Cranfield Health, Cranfield University, Bedfordshire, UK

The authors present an interesting case of post-orgasmic severe fatigue and allergy-like reactions. Although several similar cases have been reported in the literature or professional discussion forums, we are still far away from understanding the pathophysiology of this phenomenon or how to manage it clinically. In this reviewer's opinion, one of the main reasons for not being able to understand the pathophysiology is the lack of robust clinical data. To my knowledge, no one has

collected blood samples from patients before and after sexual activity to determine the changes in patients' chemistry. One obvious and simple thing to measure is the neutrophil, basophil counts and Ig levels to assess whether this is indeed an allergic reaction and what type of allergic reaction it might be. Others may be other biomarkers of allergy or inflammation. The field is looking forward to such a study.

Competing Interests: No competing interests were disclosed.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Author Response 27 Apr 2013

abdalla attia, Minoufiya University, Shibin El Kom, Egypt

Dear Dr Cellek,

Thanks for your comment. We think that this case, as you mentioned, needs further study in order to clarify the pathogenesis that we proposed. The allergic theory against semen components, published by Waldinger and his colleagues, may be consistent with ours, although we have some reservations. The hypothesized atopy in these patients needs to be investigated well before and after orgasm. In our case, we recommend studying IgE levels and you have recommended measuring basophil and neutrophil counts before and after. If evidence of atopy could be found, these patients may respond to systemic steroids, as we tried to show with our patient. Survey and screening for these patients is the way to discover more about the pathogenesis of this condition and we are ready to cooperate with others to study such cases.

Thanks,
Abdalla Attia
The author of the case

Competing Interests: No competing interests were disclosed.

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