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CASE REPORT

Negative allergy study in a case of postorgasmic illness syndrome (POIS)

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KEYWORDS
Semen allergy;
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Abstract Postorgasmic illness syndrome (POIS) is a rarely described syndrome characterized by transient flu-like symptoms and cognition disorders. Recent studies suggest that immunogenic reactivity to autologous semen is the underlying mechanism in POIS.

Our study is regarding a 30-year-old that visited our unit for an allergy consultation because he experienced malaise after ejaculations.

Skin prick tests and intracutaneous tests with autologous diluted semen with negative results were performed. Immunoblotting and western blot of the patient's autologous semen showed negative results.

To complete the study, we intended to rule out other possible causes such as urological, hormonal, or neuropsychiatric disorders.

We present a case of POIS based on the clinical criteria that did not show an IgE mediated cause. In the case of our patient, we could not identify the underlying cause; however, we believe that the possible involvement of neurobiochemical mediators should be studied.

PALABRAS CLAVE
Alergia a semen;
Síndrome de enfermedad post-orgásmica;
Disfunción sexual;
Dolor post-eyaculación

Síndrome de enfermedad post-orgásmica: no evidencia de causalidad alérgica

Resumen El síndrome de enfermedad post-orgásmica (POIS) es un síndrome infrecuente caracterizado por síntomas catarrales y alteraciones cognitivas post-eyaculatorias. Estudios recientes sugieren que la etiología se basa en mecanismos inmunológicos dirigidos al semen autólogo.

Nuestro caso clínico se basa en el estudio inmunológico realizado en un varón de 30 años que acudió a nuestras consultas alergológicas debido a sus alteraciones clínicas post-eyaculatorias.

Se realizaron pruebas cutáneas en forma de *prick test* e intradermorreacción, así como un estudio *in vitro* (*Immunoblotting* y *Western blot*) del semen autólogo del paciente con resultado negativo.

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Para completar nuestro estudio etiológico, realizamos pruebas complementarias para descartar una posible etiología urológica, hormonal o neuropsiquiátrica, con resultado dentro de la normalidad.

Presentamos un caso de POIS basado en criterios clínicos sin evidenciar causalidad IgE mediada. No pudimos identificar la etiología de su enfermedad, aunque creemos que los mediadores neuro-bioquímicos podrían jugar un papel importante en esta etiología.

Introduction

''Postorgasmic illness syndrome (POIS)'' was first described in the literature in 2002 by Waldinger and Schweitzer.[1] This syndrome includes a series of symptoms such as extreme fatigue, myalgia or flu-like symptoms immediately after ejaculation, which disappear within 2–7 days[2] (Table 1). It seems that this syndrome represents a spectrum of symptoms that can include different etiologies, so a detailed study must be performed in these patients, but in many cases the origin remains unknown. Among the possible causes, recent studies have shown an immunological Palteration with prick test positive to autologous sperm in many patients and hyposensitization therapy has been used successfully in 2 cases.[3]

Methods

Our report concerns a 30-year-old patient with no family history of atopy or relevant medical history. Personal history of atopy reported as mild atopic dermatitis and mild polysensitized intermittent asthma. He came for an allergy consultation in our Unit due to malaise after ejaculations. Since adolescence he had presented immediately (30 min) after each ejaculation: malaise, fatigue, muscle pain, memory disorders, concentration problems, irritability, headaches, digestive disorders such as bloating and diarrhea and cutaneous xerosis of 3–5 days evolution. No associated skin lesions or respiratory involvement. Symptoms improved occasionally with analgesics and sometimes occurred in over 90% of ejaculations.

Table 1 POIS diagnosis using 5 criteria.

1. One or more of these symptoms:
-flu-like symptoms
-extreme fatigue
-muscular pain
-feverish sensation
-memory alterations
-irritability
-problems concentrating
-incoherent speech
-nasal congestion and rhinorrhea
-itchy eyes
2. Symptoms occur seconds to a few hours after ejaculation
3. Symptoms occur after >90% of ejaculations
4. Symptoms last 2–7 days
5. Symptoms then disappear spontaneously

Following the lines of the Waldinger research group, based on their publications,[1,2] we performed an immunological study. Skin tests to inhalant and food allergens were realized. Fresh seminal fluid was collected on 10 mL a sterile centrifuge tube by masturbation and liquefy for 30 min. Then the ejaculate was diluted using 0.9% saline to a concentration of 1:1 for SPT. Sodium dodecyl sulphate polyacrylamide gel electrophoresis (SDS-PAGE) immunoblotting was carried out with the patient's whole seminal plasma with and without 2-mercaptoethanol.

To complete the study, we wanted to rule out other possible causes of this pathology such as urological, hormonal or neuropsychiatric disorders.

Results

Aeroallergens prick test were positive to cat and dog dander, Alternaria, Cladosporium, banana, olive, pine, Chenopodium, cynodon and phragmites, skin food tests were positive to milk (which he tolerates).

The skin test to autologous semen was considered negative according to the recommendations of Global Allergy and Asthma European Network.[4]

Analytical total IgE was 117 KU/L and immunoblotting did not identify any IgE binding band in 2-mercaptoethanol-treated sample neither in non-treated one.

A hormonal study was conducted with an analytical determination of FSH, testosterone, dihydrotestosterone, prolactin, TSH, T3, T4 and catecholamines, which were within normal limits.

A neuropsychiatric study with an SCL-30-R questionnaire was performed with a score that showed no indication of pathology.

A urological study was conducted with an IIEF-5 questionnaire with the result of mild erectile dysfunction. A semen study was done with a seminogram showing moderate astenozoospermia, semen study with zinc 365 mcmol/L, fructose in seminal plasma of 385 mg/dL and citric acid in seminal plasma of 232 mg/dL and a semen culture was negative.

The diagnosis focused on POIS: postorgasmic illness syndrome based on clinical criteria but without evidence of immunoallergic pathogenesis.

Discussion

We report a case of postorgasmic illness syndrome based on clinical criteria but without evidence of immunoallergic pathogenesis against to the results in the Jian et al. study.[5]

We could not demonstrate any other of the described causes of POIS syndrome. The patient is currently followed-up by the Neurology Department and the involvement of neurobiochemical mediators is evaluated. For the moment, neurologists have not found any neurological alteration that would justify the disease.

A limitation of this case report was that the SPT with autologous semen was not performed in a control group of healthy men to a better interpretation of the test, as described in the article of Waldinger study.[6]

In the same way, for a correct interpretation of the results of the skin test, it would be necessary to standardize the different concentrations of the samples tested.

Allergen immunotherapy, also known as desensitization or hypo-sensitization, is a medical treatment for some types of allergies. Currently it is useful for allergic rhinitis, allergic asthma or venom allergy.[7] This treatment involves exposing patients to increasing concentrations of the allergen in order to change the immune system's response.

In our opinion, although the immunoallergic etiology has been described in some patients with POIS syndrome and immunotherapy with seminal plasma has been used successfully, other possible causes should be ruled out before establishing a therapeutical approach. Since better validated test is needed to demonstrate an allergic mechanism in POIS, treatment of the disease through immunotherapy should be done with caution.

Ethical disclosures

Protection of human and animal subjects. The authors state that the procedures followed conformed to the ethical standards of the responsible human experimentation committee and in agreement with the World Medical Association and the Declaration of Helsinki.

Confidentiality of data. The authors state that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. The authors have obtained the informed consent of the patients and/or subjects referred to in the article. This document is in the possession of the correspondence author.

Conflicts of interest

None.

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