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One case of seminal fluid induced anaphylaxis

To the editor: Hypersensitivity to human seminal fluid is an uncommon phenomenon, which can manifest as localized or systemic clinical symptoms. Seminal fluid induced anaphylaxis is rarely reported in China till now. In this paper, we reported a Chinese patient with a rather severe attack of seminal fluid hypersensitivity.

A 39-year-old woman was admitted to our Allergy Department for Angioedema and Urticaria after sexual intercourse with her husband, accompanied with itchy of the skin, nose and eyes, wheezing, dyspnea, sneezing, running nose, stuffy nose, without abdominal pain, vomiting and dizzy. She received artificial abortion several times and gave birth to the first child 3 years ago without birth control for 7 years. After delivery 6 months, she had problem with the intercourse. The symptom attacked 4–5 times 3 years recently and condom could prevent the attacks. The patient ever went to the emergency room twice, blood pressure was 90/60 mmHg and lower than usual blood pressure 120/80 mmHg, her symptoms were relieved gradually after glucocorticoid and antihistamine was accepted.

Inhalant allergen skin test was positive of dog dander. The serum IgE was checked by UniCAP system (Phadia, USA), and total IgE was 162 kU/L (normal range 0–60 kU/L), Phadiatop was 2 grade/2.64 PAU/L, seminal fluid was 2 grade/0.74 kUA/L, dog dander was 3 grade/12.3 kUA/L, other allergen such as *D. farinae*, house dust, formaldehyde and latex were all 0 grade (<0.35 kUA/L). Based on the medical history and test results, the patient was diagnosed hypersensitivity to seminal fluid definitely. Because of the serious symptoms such as dyspnea and low blood pressure, seminal fluid induce anaphylaxis was diagnosed.

Currently, 14–75 kD glycoprotein and prostate specific antigens have been suggested as possible allergens of seminal fluid hypersensitivity.¹

The clinical manifestations are diverse and vary from weak reactions such as vaginal itching to systemic reactions such as diffuse urticaria; angioedema of facial, tongue, lip or throat; dyspnea; wheezing; abdominal, pelvic or vulvovaginal pain and swelling; nausea; vomiting; diarrhea; general malaise; hypotension; loss of consciousness or even complete circulatory failure. Symptoms often occurred immediately after exposure to the seminal fluid within half an hour of coitus.

Diagnosis is usually based on medical history and the result

of allergen test. If the symptom does not attack after condom protection, seminal fluid allergy can be confirmed. The condition should be distinguished from hypersensitivity to latex or lubricants, gynecological infection, vaginal structural problems and irritant reactions.

For treatment, condom protection are recommended to some patients do not want further conception. To other patients who hope to be pregnancy, antihistamine was suggested to the patients who only have the local symptoms.² If the patients have the systemic symptoms, desensitization is considered a good treatment option.³ Intravaginal desensitization were previous reported, which may provide good resolution for the patients with localized or systemic symptoms. The patients have to maintain constant exposure to seminal fluid in order to keep tolerogenic response to seminal fluid after desensitization. Artificial insemination is an effective way to achieve a pregnancy in patients with seminal plasma hypersensitivity.⁴

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