

Seminal fluid anaphylaxis: A Case report

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OBJECTIVE

Allergic reactions to human seminal plasma are rare. However, due to the socially sensitive nature of this problem, it is likely that symptoms are underreported or misdiagnosed. This case details a woman diagnosed with seminal fluid anaphylaxis and discusses the pathophysiology and management options.

CASE REPORT

A healthy 33-year-old woman presented to hospital with vomiting, difficulty breathing and widespread itchy rash following sexual intercourse. This is in the context of being in a long-term heterosexual relationship with previous spontaneous conception. She was diagnosed with anaphylaxis and treated with adrenaline. Further history identified that she had been experiencing localised rash and swelling in the vagina and other body parts exposed to semen for 12 months prior to the acute presentation after receiving two doses of the COVID-19 immunisation. These symptoms did not occur when the couple used condoms. Allergy investigations demonstrated a positive specific immunoglobulin E antigen to human seminal plasma, and she was diagnosed with seminal plasma hypersensitivity (SPH). As the couple desired further children, she was referred to fertility and options for conception in the context of SPH were explored.

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DISCUSSION

SPH reactions present either as systemic or localised vaginal reactions. Most systemic SPH reactions are caused by type I IgE-mediated hypersensitivity whilst localised reactions do not involve IgE. Multiple allergenic proteins within seminal plasma have been identified in SPH however sperm proteins have not been implicated. Most women with SPH have a history of other allergies. However, development of SPH has also been associated with events such as a new partner, gynaecological procedures and resumption of intercourse following abstinence or menopause.

All women who have experienced systemic SPH should be prescribed an adrenaline autoinjector. Other management options depend on whether the woman wishes to conceive. Use of condoms prevents exposure to seminal plasma proteins and thereby prevents both local and systemic SPH. Women who desire conception can be offered intravaginal or subcutaneous desensitisation procedures to induce tolerance or the use of artificial insemination with extensively washed spermatozoa free of seminal proteins.

CONCLUSION

SPH has not been shown to directly cause infertility but makes spontaneous conception challenging due to the local or potentially life-threatening manifestations caused by unprotected vaginal intercourse as in our case.