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LETTER TO THE EDITOR—BRIEF COMMUNICATION

Human seminal plasma hypersensitivity: an unusual indication for in vitro fertilization

Dear Editor,

We would like to report a case of severe allergy to seminal fluid, a rare but interesting indication for assisted conception treatment.

A 29-year-old teacher, known to be allergic to latex and penicillin, was seen in the gynaecology clinic with eighteen months' history of localised urticaria lasting under 12 h whenever her partner's semen came into contact with her skin. Vaginal intercourse with ejaculation had led to local vaginal irritation for 24 or more hours while oral sex would lead to local irritation of the mouth and mild shortness of breath accompanied by a wheeze and tightness of the chest. Cutaneous or vaginal contact with semen did not produce systemic anaphylaxis but the symptoms would repeat again without improvement every time she came in contact with her partner's semen. The use of a non-latex condom appeared to avert all reaction and she had not suffered from any of these symptoms with her previous partner.

Seminal fluid allergy was suspected and she was referred to the allergy clinic, where hypersensitivity tests using common food and inhalant allergens confirmed reactions to many allergens, including, pollen, cat dander, dog dander, house dust mite and shrub pollen, amongst others. Skin-prick testing showed a very significant sensitivity to latex proteins and, as suspected, to her partner's seminal fluid.

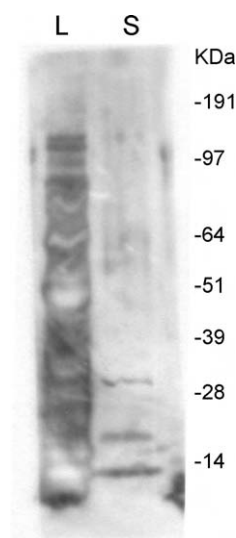


Fig. 1. Western blot of latex (L) and semen from patient's husband (S). The semen sample shows 3 bands immunoreactive bands of estimated molecular weight 12, 18 and 30 kDa. Whilst the commercial latex preparation shows numerous immunoreactive bands.

The patient was very keen to conceive naturally and was concerned about implications regarding fertility and conception. Different options were discussed and a decision was made to investigate further which protein she was allergic to, in order to decide if desensitization would be a treatment option.

Semen from the patient's husband, and latex, were prepared and gel electrophoresis was performed. The semen sample showed three immunoreactive bands of estimated molecular weight 12, 18 and 30 kD while the commercial latex preparation showed numerous immunoreactive bands (Fig. 1).

The conclusion from this test was that she was allergic to more than one single allergen and thus, desensitization was considered less likely to be successful while at the same time, it carried the risk of inducing an allergic reaction with new exposure to seminal fluid during the process.

She was advised to have in vitro fertilization and conceived on the first attempt, eventually delivering vaginally at term a healthy baby boy weighing 3.62 kg.

Human seminal plasma hypersensitivity (HSPH) in women is an exceptionally rare phenomenon and there are no accurate data on incidence and prevalence. Since Halpern et al. [1] reported the first case in English in 1966, HSPH has been increasingly recognised [2]. Most affected women are below the age of 40 years and present with a history of allergy to a list of substances, as in the case described [3].

This type of hypersensitivity reaction is usually detected during or soon after coitus but in this case it was noted also after skin contact. Symptoms can vary widely, from mild itchiness to systemic anaphylactic shock or both [3,4].

Treatment options include complete avoidance of unprotected intercourse using latex and/or non-latex condoms but this is difficult if the condition affects a sexually active fertile female who wishes to conceive.

Although intravaginal desensitization may allow the woman to undergo fertility treatment or assisted conception, the process is not always successful and serious anaphylactic reactions have been reported with intrauterine insemination [5,6]. In the case described, testing positive to multiple allergens led to the suspicion that desensitization would be more difficult than if she were allergic to a single element. Since the patient was allergic to many allergens, an attempt of desensitization would be less likely to succeed and would also carry a real risk of inducing an anaphylactic reaction. Thus, the decision was made to suggest IVF, rather than intravaginal desensitization, as a first line of treatment.

HSPH does not cause infertility but it might prevent conception because of the accompanying symptoms [2] and as such is a rare but a reasonable indication for in vitro fertilization.

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