

# Vulvar edema

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## VULVAR EDEMA

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**Key words:** vulvae edema, patch test, lubricant gel, genital allergy

Vulvar edema is associated with a variety of physiologic and pathologic conditions. The edema can result from inflammatory conditions (1, 2), infections (3), infestations, trauma (3), pregnancy (4), tumors and iatrogenic causes. It may be a local manifestation of systemic conditions including inflammatory bowel (disease Crohn's disease) (5), nephrotic syndrome or congestive heart failure (6).

We report a case of a 22-old patient, who was presented to our Department with pruritus, edema and erythema of labia minora (Fig. 1). Do to extensive edema of labia minora she had acute urinary retention and she was in extreme discomfort. She denied any trauma, abdominal pain and she was not taking any medicaments. She reported occasional hand and axillary eczema. The patients later admitted that symptoms appeared 24 hours after using a lubricant (K-Y Touch 2-in-1 Massage Crème & Pleasure Gel®) during sexual intercourse. The lubricant ingredients were propylene glycol, polyethylene glycol, cyclopentasiloxan, silicone, PEG/PPG-18/18 dimethicone, polysorbate 20, water, sodium chloride, dimethiconol, hydroxypropyl cellulose, fragrance/parfum, tocopherol (7). She was treated with a short course of per oral prednisone, per oral antihistamines and local corticosteroids. Edema resolved within few days of treatment. Two months later we performed a patch test with the baseline series (Chemotechnique Diagnostics, Vellinge, Sweden, Imunološki zavod, Zagreb, Croatia) and a semi-open test with the lubricant that she had been using. Testing showed a positive reaction (++) to fragrance mix (8% pet) on day (D) 3. Fragrance mix was later separated into its components, and on D(3) cinnamyl alcohol (+), cinnamal (+), eugenol (++) , isoeugenol (++) , geraniol (+), hydroxycitronella (++) were positive (Fig. 2). On D(3) the semi-open test to lubricant was positive (+), too (Fig. 3). The manufacturer was contacted to obtain the ingredients, but did not respond, so we patch tested the ingredients, which were commercially available for patch testing: propylene glycol, polyethylene glycol, tocopherol (Chemotechnique Diagnostics, Vellinge, Sweden), which were all negative. According to the test results we concluded that patch test reactions were relevant to patient history. Also, patients reported occasional hand and axillary eczema which could be also explained with positive patch test results to fragrances.

Genital allergy is uncommon but should be considered in all patients with unexplained anogenital erythema and edema. It is difficult to determine the cause of the vulvar edema just with the clinical examination. According to the patient's history and pathophysiology of the edema, an individual approach for diagnostic and the treatment is required. Treatment of vulvar edema is necessary, since it may be, painful, cause urinary retention and occlusion of the vaginal opening (1-6). Treatment should be directed by the specific cause of edema. Patch testing helps identify which substances may be causing a delayed-type allergic reaction in a patient with vulvar erythema and edema if contact allergy is suspected. It is necessary to take good patient history, because out of embarrassment, patients may not tell about products that they are using during sexually intercourse.

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**Figure 1.**

Edema and erythema of labia minora in 22-old patient

**Figure 2.**

Positive patch on day 3 to cinnamy alchohol (+), cinnamal (+), eugenol (++), isoeugenol (++), geraniol (+), hydroxycitronella (++)

**Figure 3.**

Positive semi-open patch test on day 3 (+) test to K-Y Touch 2-in-1 Massage Crème & Pleasure Gel®



cinnamyl alcohol

cinnamal

geraniol

eugenol

hydroxycitronella

isoeugenol





K-Y Touch 2-  
in-1 Massage  
Crème &  
Pleasure Gel