

# Vulvar oedema

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**Fig. 1.** Oedema and erythema of the labia minora in a 22-year-old patient.

Vulvar oedema is associated with a variety of physiological and pathological conditions. The oedema can result from inflammatory conditions (1, 2), infections (3), infestations, trauma (3), pregnancy (4), tumours, 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).

## Case Report

We report a case of a 22-year-old-patient who presented to our department with pruritus, oedema and erythema of the labia minora (Fig. 1). Because of extensive oedema of the labia minora, she had acute urinary retention and was in extreme discomfort. She denied any trauma or



**Fig. 2.** Positive patch reactions on day 3 to cinnamyl alcohol (+), cinnamal (+), eugenol (++), isoeugenol (++), geraniol (+), and hydroxycitronellal (++).

abdominal pain, and she was not taking any medications. She reported occasional hand and axillary eczema. She later admitted that the symptoms had appeared 24 h after she had used a lubricant (K-Y Touch 2-in-1 Massage Crème & Pleasure Gel®) during sexual intercourse. The lubricant ingredients were propylene glycol, polyethylene glycol (PEG), cyclopentasiloxane, silicone, PEG/PPG-18/18 dimethicone, polysorbate 20, water, sodium chloride, dimethiconol, hydroxypropyl cellulose, fragrance/parfum, and tocopherol (7). The patient was treated with a short course of oral prednisone, oral antihistamines, and local corticosteroids. The oedema resolved within a few days of treatment. Two months later, we performed a patch test with the baseline series (Chemotechnique Diagnostics, Vellinge, Sweden;

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

Imunološki zavod, Zagreb, Croatia), and a semi-open test with the lubricant that the patient had been using. There was a positive reaction (++) to fragrance mix I (8% pet.) on day (D) 3. Fragrance mix I was later separated into its components, and, on D3, cinnamyl alcohol (+), cinnamal (+), eugenol (++) , isoeugenol (++) , geraniol (+) and hydroxycitronellal (++) gave positive reactions (Fig. 2). On D3, the semi-open test with lubricant also gave a positive reaction (Fig. 3). The manufacturer was

contacted to obtain the ingredients, but did not respond, so we patch tested the ingredients that were commercially available for patch testing, namely propylene glycol, PEG, and tocopherol (Chemotechnique Diagnostics), and all gave negative results. According to the test results, we concluded that the patch test reactions were relevant to the patient's history. Also, the patient reported occasional hand and axillary eczema, which could also be explained by positive patch test reactions to fragrances.

## Discussion

Genital allergy is uncommon, but should be considered in all patients with unexplained anogenital erythema and oedema. It is difficult to determine the cause of the vulvar oedema by clinical examination alone. An individual approach to diagnosis and treatment is required, according to the patient's history and the pathophysiology of the oedema. Treatment of vulvar oedema is necessary, because it may be painful, and cause urinary retention and occlusion of the vaginal opening (1–6). Treatment should be directed by the specific cause of the oedema. Patch testing helps to identify which substances may be causing a delayed-type allergic reaction in a patient with vulvar erythema and oedema if contact allergy is suspected. It is necessary to take a thorough patient history, as, because of embarrassment, patients may not mention products that they use during sexual intercourse.

## References

- 1 Amankwah Y, Haefner H. Vulvar edema. *Dermatol Clin* 2010; **28**: 765–777.
- 2 Rahimi S, Lazarou G. Late-onset allergic reaction to povidone-iodine resulting in vulvar edema and urinary retention. *Obstet Gynecol* 2010; **116**: 562–564.
- 3 O'Mahony C, Mullin N, Sissons G. Extensive vulvar oedema secondary to severe pelvic infection. *Int J STD AIDS* 2008; **19**: 565–567.
- 4 Afshan N, Gokhale L. Vulval oedema: a conundrum! *BMJ Case Rep* 2015; **2015**: pii: bcr2014206666. <https://doi.org/10.1136/bcr-2014-206666>.
- 5 Bouzidi H, Chakiri R, Amraoui N et al. Crohn's disease presenting as vulvar edema in a 15-year-old girl. *J Dermatol Case Rep* 2014; **8**: 75–77.
- 6 Gupta S. Benign lesions of the vulva and vagina. In: *A Comprehensive Textbook of Obstetrics and Gynecology*, 1st edition, Gupta S (ed.). New Delhi, Jaypee Brothers Medical Publishers, 2011: pp. 110–122.
- 7 K-Y® touch® 2-in-1 massage crème & pleasure gel. Product ingredient information. Available at: <http://www.rbnainfo.com/productpro/ProductSearch.do?brandId=45&productLineId=1579&searchType=PL&template=1> (last accessed 24 August 2017).