

Allergic reaction to condom catheter for bladder incontinence

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Genital contact allergy should be considered as a possible diagnosis in all patients with genital soreness for which no infection or other specific dermatological disease can be identified and in whom symptoms remain unchanged or worsen with specific treatment (1). We report a case of allergic contact dermatitis affecting the penis caused by a condom catheter for bladder incontinence.

Case Report

A 72-year-old non-atopic man presented with erythematous–oedematous dermatitis of the penile shaft and balanoposthitis that appeared 1 month before

the visit (Fig. 1). He required the use of a condom catheter for bladder incontinence following radical prostatectomy owing to a localized prostate cancer that occurred in 1995. For 17 years, he used a latex condom non-lubricated catheter. A rubber tube for drainage was attached to the condom that allowed the urine to pass



Fig. 1. Condom catheter. Erythematous and oedematous eruption on the penis.

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into a urinary storage bag with an elastic strap that secured the catheter bag to the left leg. Microbiological investigation and serology gave negative results. A prick test with latex protein was negative. The patient was subsequently patch tested with the Società Italiana di Dermatologia e Allergologia Professionale e Ambientale (SIDAPA) baseline series. Patch test readings were performed on D2, D4, and D7. At D4, a reaction to thiuram mix (1% pet.) was recorded as ++. A strong response (++) was elicited by pieces of the non-lubricated rubber condom and the rubber tubing (tested 'as is'), whereas a fragment of the elastic strap yielded no response. Carba mix (3% pet.) yielded no response. The dermatitis quickly resolved without the use of any drug, by use of a silicone condom which had rubber components and no rubber accelerators, such as thiurams. The patient has remained asymptomatic with the change of catheter type.

Discussion

Condom-related allergic contact dermatitis frequently presents with oedema and dermatitis of the penile glans and shaft or the scrotum, and, in severe cases of prolonged contact, epidermal sloughing of the entire penile shaft may occur (2). Contact sensitization to thiurams in latex is common (3, 4). Contact dermatitis of the penis caused by accelerator chemical residues in condom catheters was first described in 1979 (5), and another report was published in 1995 (2).

Our patient's contact allergy to thiurams correlated with his clinical history. The manufacturer confirmed the presence of thiurams in the medical device. Clinical relevance was confirmed by positive reactions to the latex condom catheter and by subsequent clearance of the dermatitis through source avoidance. Contact dermatitis can be considered as a long-term complication after many years of catheter use, and epicutaneous patch testing is regarded as the best method for diagnosing allergic contact dermatitis.

References

- 1 Sonnex C. Genital allergy. *Sex Transm Infect* 2004; **80**: 4–7.
- 2 Harmon CB, Connolly SM, Larson TR. Condom-related allergic contact dermatitis. *J Urol* 1995; **153**: 1227–1228.
- 3 Rademarker M, Forsyth A. Allergic reactions to rubber condoms. *Genitourin Med* 1989; **65**: 194–195.
- 4 Nettis E, Colanardi MC, Ferrannini A, Tursi A. Sensitization to rubber additives. *Allergy* 2001; **56**: 1018–1020.
- 5 Bransbury AJ. Allergy to rubber condom urinals and medical adhesives in male spinal injury patients. *Contact Dermatitis* 1979; **5**: 317–323.