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## The Importance of Patch Testing in Anogenital Dermatitis: Ten-Year Experience of a Tertiary Referral Center in Northern Portugal

### A Importância dos Testes Epicutâneos na Dermatite Anogenital: Dez Anos de Experiência de um Centro de Referência Terciário no Norte de Portugal

**Keywords:** Anus Diseases; Dermatitis, Allergic Contact; Genital Diseases, Female; Genital Diseases, Male; Patch Tests; Portugal  
**Palavras-chave:** Dermatite Alérgica de Contato; Doenças do Ânus; Doenças dos Genitais Femininos; Doenças dos Genitais Masculinos; Portugal; Testes do Emplastro

Dear Editor,

Anogenital dermatitis is an underreported and underdiagnosed inflammatory skin disease that affects both women and men.<sup>1,2</sup> Allergic contact dermatitis (ACD) affecting the anogenital area is more likely to be developed in skin that was previously injured or exposed to several allergens and irritants.<sup>2,3</sup> We aimed to provide data from a Portuguese tertiary referral center regarding this overlooked condition that is associated with impaired quality of life.

A retrospective analysis was conducted among patients with anogenital dermatitis who underwent patch testing from January 2009 to December 2019. All patients were patch tested with the Portuguese Contact Dermatitis Research Group baseline series; cosmetics (n = 11); textile colors and finishing (n = 10); fragrances (n = 1); local anesthetics (n = 7); medicines (n = 5) (Chemotechnique Diagnostics, Vellinge, Sweden®); and personal products 'as is' (n = 24).

Fisher's test was used, and the significance level alpha (p) was set to 0.05.

Informed consent and ethical approval were not obtained as all data were collected as part of routine clinical care, and retrospectively aggregated and anonymized for the analysis purpose. A total of 47 patients were tested during the study period (55.3% were female; mean age of 48.3 ± 13.8 years). Exclusive anogenital involvement was observed in 78.7% of patients, while the remaining 21.3% also had extragenital involvement. The final diagnosis of ACD was established in 42.6% of patients, and half of those patients had one or more relevant reactions in patch testing. Males with exclusive anogenital involvement were more likely to have ACD as the final diagnosis (60.0% vs 45.5%). Patients with concomitant extragenital involvement were less likely to have ACD as the final diagnosis [n = 1 (10.0%) vs n = 19 (51.5%); p < 0.05].

Topical anesthetics (caine mix III 10% pet; 18.4%), fragrances (fragrance mix I 8.0% pet; 15.8%) and preservatives (methylidibromo glutaronitrile 0.3% pet; 10.5%) were the most identified allergens (Table 1). Medicines were the most frequent source of sensitization (50.0%) – mainly formulations with cinchocaine and tetracaine (89.0%) (Table 1).

Other than ACD, the most frequent diagnoses were *lichen simplex chronicus* (42.0%), irritative eczema (31.0%), inverse psoriasis (7.6%), seborrheic eczema (7.6%) and other dermatoses (11.8%).

Our findings are in line with a recently published large retrospective cross-sectional study,<sup>2</sup> but other large case series point towards distinct allergen culprits.<sup>4</sup> Regarding the culprits of ACD, differences between distinct European countries have been described over the years, which makes it essential to contribute with data on the Portuguese scenario.<sup>5</sup>

A careful workup is essential in order to establish an accurate final diagnosis. We suggest that individuals with anogenital dermatitis, especially those without extragenital involvement and history of application of topical medicines, should undergo comprehensive patch testing so that the prompt identification of the culprits can be made. Topical medicines, such as those for the treatment of hemorrhoids, should be used cautiously, avoiding combinations of medicines that might have a high allergenic potential. The presence of fragrances, preservatives, and surfactants in topical medicines and personal care products are also possible sources for sensitization. Most allergens are everyday substances that are harmless to most people. However, its presence in topical medicines and personal care products is constantly changing. Therefore, an early evaluation is required in suspicious cases.

#### AUTHORS CONTRIBUTION

JL, MLM: Conception and design; draft of the article; data collection, critical review.

MN, IL: Conception and design; critical review.

MS: Critical review of the article.

#### PROTECTION OF HUMANS AND ANIMALS

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the Helsinki Declaration of the World Medical Association updated in 2013.

Table 1 – Patch testing results of patients with a final diagnosis of allergic contact dermatitis

Number of relevant allergen reactions	
1	10 (50.0%)
≥ 1	10 (50.0%)
Positive allergens	
Caine mix III 10,0% pet <sup>a</sup>	7 (18.4%)
Personal products 'as is'	7 (18.4%)
Fragrance mix I 8.0% pet <sup>b</sup>	6 (15.8%)
Methyldibromo glutaronitrile 0.3% pet	4 (10.5%)
Peru balsam 25% pet	2 (5.3%)
Methylisothiazolinone 0.05% aq	2 (5.3%)
Formaldehyde 1.0% aq	2 (5.3%)
Imidazolidinyl urea 2% aq	1 (2.6%)
Cocamidopropyl betaine 1% aq	1 (2.6%)
Sorbic acid 2.0% pet	1 (2.6%)
Triclosan 2.0% pet	1 (2.6%)
Colophonium 20.0% pet	1 (2.6%)
Hydrocortisone-17-butyrate 1.0% pet	1 (2.6%)
Budesonide 0.1% pet	1 (2.6%)
Disperse blue 106 1.0% pet	1 (2.6%)
Source of sensitization	
Medicines <sup>Δ</sup>	9 (50.0%)
Cosmetics	6 (33.3%)
Clothing	1 (5.6%)
Other	4 (11.1%)

<sup>a</sup> Benzocaine 5.0%, Dibucaine hydrochloride 2.5%, Tetracaine hydrochloride 2.5%

<sup>b</sup> Cinnamyl alcohol, cinnamal, hydroxycitronellal, amyl cinnamal, geraniol, eugenol, isoeugenol oakmoss absolute (1.0%)

<sup>Δ</sup> 89.0% corresponded to topical applications for treatment of hemorrhoids

Aq: aqueous; pet: petrolatum

## DATA CONFIDENTIALITY

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

## COMPETING INTERESTS

The authors have declared that no competing interests exist.

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