

Allergic contact dermatitis caused by topical ketoconazole: a relevant issue? Review of ketoconazole-positive patch tests

Rosana Lazzarini¹, Mariana F. S. Hafner¹ , Barbara A. F. Miguel¹, Nathalia T. Kawakami² and Beatriz H. Y. Nakagome²

¹Dermatology Clinic, Department of Medicine, Santa Casa de São Paulo Hospital, 01221-020 São Paulo, Brazil and ²Santa Casa de São Paulo School of Medicine, Department of Medicine, 01221-020 São Paulo, Brazil

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Allergic contact dermatitis caused by topical drugs may be iatrogenic or related to self-medication. One of the most common topical antifungals in Brazil is ketoconazole, which may cause allergic contact dermatitis (ACD)

and photoallergic contact dermatitis (PACD) (1, 2). The aim of the current study was to evaluate the frequency and type of contact dermatitis triggered by ketoconazole, and the characteristics of the affected population.

Correspondence: Mariana Hafner, MD, Dermatology Clinic, Department of Medicine, Santa Casa de São Paulo Hospital, Rua Cesário Mota Junior, 112 - São Paulo, SP 01221-020, Brazil. Tel: +55 1121767240.
E-mail: mariana@hafner.med.br

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Methods

A total of 749 patients patch tested between January 2010 and March 2017 for suspected ACD were retrospectively analysed. Patients with possible ACD caused by topical ketoconazole were patch tested with the Brazilian baseline series (FDA Allergenic[®], Rio de Janeiro, Brazil)



Fig. 1. Photoallergic contact dermatitis caused by topical ketoconazole.

and ketoconazole 1% pet. (3), obtained from the hospital pharmacy. Photopatch testing was also carried out when indicated, with exposure to ultraviolet A (10 J/cm^2). The readings were performed in accordance with ICDRG criteria (4). Data were collected in Microsoft Excel® for analysis.

Results

Among the 749 patients, 78 (10.4%) had suspected ACD/PACD caused by ketoconazole. Of these, 17 (21.8%) had positive patch test reactions. Positive test reactions to ketoconazole therefore accounted for 2.3% of the total patch tests performed in the study period. Five patients were also subjected to photopatch testing, with positive reactions in all cases (Figs. 1 and 2). Among the patients with a confirmed diagnosis of ACD/PACD, 12 were women. The mean age of patients was 57.3 years, and the median age was 61.3 years. The mean duration of ACD/PACD was 34.4 months (range: 2 months to 11 years). These data show a long duration of clinical disease, which probably reflects diagnostic difficulties. The face was the region most often affected, in 11 patients; the legs were affected in 9 patients, and the arms in 7. Among the patients with facial involvement, 5 had PACD, yielding the highest number of cases in this anatomical

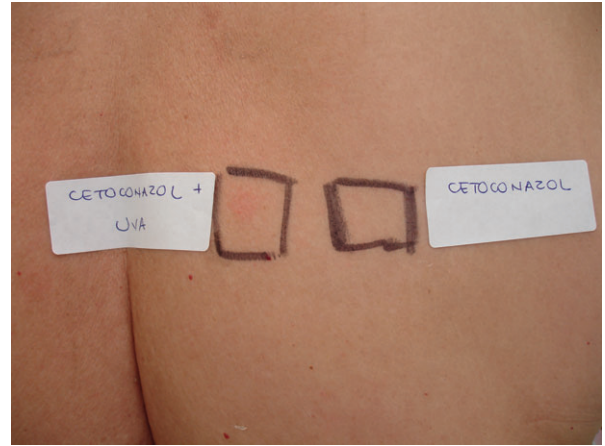


Fig. 2. Positive photopatch test reaction to ketoconazole.

site. The other body regions were related to the application areas of the medication. ACD/PACD caused by ketoconazole was combined with other dermatoses, such as: ACD caused by other sensitizers in 14 cases, pruritus in 2 cases, and drug eruption caused by non-steroidal anti-inflammatory drugs in 1 case.

Discussion

Few cases of ACD caused by ketoconazole are described in the literature (5, 6). A European study identified 6 cases (17.1%) among 35 tested patients, compatible with the data of the current study (2). Photosensitivity to ketoconazole is described in the literature as being a consequence of its systemic use. The present study, however, shows the importance of considering patch and photopatch testing with ketoconazole also when there is clinical suspicion of ACD/PACD caused by topical medications. There are no epidemiological data on the extent of use of ketoconazole in Brazil. However, it is the only topical antifungal available in the national public health system. In addition, there are at least 25 commercial products that contain ketoconazole, as confirmed in a Brazilian research database accessible at www.ppac.com.br [Programme for Contact Allergen Research (7)], such as medications and shampoos, all of them available over the counter. Therefore, although ketoconazole is little discussed in the literature, it is possible that it is a relevant allergen in some parts of the world, especially where there is indiscriminate use of this medication.

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