

Abstract N°: 3693**Treatment optimization of squamous-hyperkeratotic foot mycosis in type 2 diabetes mellitus patients**

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Introduction & Objectives: Squamous-hyperkeratotic mycosis of feet is the most prevalent dermatological condition in type 2 diabetes patients. The cutaneous symptoms develop slowly, starting with the formation of painless blistering and hyperkeratosis in areas exposed to pressure. The fungal infection adherence is promoted by poor circulation and traumatising of the feet skin. The selection of a suitable product containing components with distinct keratolytic and hydrating effects is one part of the problem solution.

The **objective** of the study was to investigate clinical efficacy of a foot balm for callus and hyperkeratosis having antifungal effect

Materials & Methods: We observed 32 patients (17 males and 15 females, aged 43 to 53 years) with mycotic foot damage. The diagnosis of foot fungal affection was confirmed by microscopic examination for pathological fungi in the affected foci. The history of diabetes mellitus ranged from 2 to 5 years in all patients.

Results: Before balm was applied to the foot skin with callus and hyperkeratotic sites, a hygiene treatment had been recommended for all patients. The balm was then applied to the affected sites of dry, clean skin twice a day. All patients experienced dry, atrophic, flaky, pink-purple skin on their toe tips, marginal hyperkeratosis of the entire heels, and symptoms of rubromycosis or epidermophytosis in the in-between toe spaces were present. All patients suffered from itching, pain and discomfort when walking.

The balm contains a large amount of urea, which provides a proteolytic effect in the corneal layer contributing to its loosening, which accelerates the exfoliation of keratinized epidermal cells. Climbazole delivers an antifungal effect. Avocado oil saturates the epidermis with lipids, restoring skin elasticity. Allantoin and lactic acid prevent cell dehydration, soften the skin and stimulate its regeneration. Tea tree essential oil produces an antiseptic effect.

Improvement of the clinical picture was observed after 4 weeks, subjective sensations (itching, pain and discomfort while walking) disappeared in most – 18 (56,2%) patients on day 5, in 10 (31,3%) on day 7 and in 4 (12,5%) on day 10; redness and squamosae after 1 week of treatment reduced in 12 (37,5%) patients, after 2 weeks in 15 (46,9%) and after 3 weeks in 5 (15,6%) patients; blistering and hyperkeratosis disappeared in 14 (43,8%) patients after 3 weeks, in 17 (53,1%) – after 4 weeks of treatment and only in 1 (3,2%) patient after 5 weeks of balm application. To monitor treatment, patients were tested three times for the detection of pathological fungi, following the application of the balm after 4-week treatment with an interval of 5 days. Test results were negative in all patients. After 1.5 months, the foot skin regained its natural colour and the hyperkeratotic sites disappeared.

Conclusion: The data obtained confirm the high efficacy of the balm, which can be recommended as a therapeutic and preventive agent in the care of diabetic feet and to remove calluses and hyperkeratotic sites, including those with mycotic damage.**