Naftifine Treatment for Dermatophytosis

Multicenter Clinical Investigations in Turkey

Turkish Multicenter Dermatophytosis Study Group

The efficacy of naftifine has been shown in a large number of clinical trials. In comparison with antimycotics such as clotrimazole,[1,2] econazole,[3] bifonazole,[4] miconazole,[5] and tioconazole, naftifine proved to be equal or superior. The studies were mostly performed in central Europe, but have recently been supplemented by trials in the United States,[6] tropical areas,[7] and Arabia.[8] The published reports verify the once daily treatment model[9,10] as well as the anti-inflammatory effect of naftifine.[11–13]

Materials and Methods

- Six clinics, with locations in Istanbul, Izmir, Ankara, and Adana, participated in this trial that covered all climatic and ethnical differences in Turkey. One hundred fifty-seven patients were evaluated who were suffering from *Tinea cruris*, *T. pedis*, and *T. corporis*. Treatment with application of 1% naftifine cream once daily lasted for 4 weeks.

  Inclusion criteria included a positive KOH scraping, positive culture, and microscopic determination of the causative agents. Patients pretreated with another preparation in the previous 4 weeks were excluded.

  Clinical symptoms were checked at weekly intervals. The antimycotic efficacy was determined by the frequency of negative cultures and the regression of the clinical symptoms (eg, erythema, pruritus, vesiculation, and scaling) and rated by a 4-point scale (0 = none, 2 = mild, 4 = moderate, and 6 = severe). At the end of each treatment a global assessment of the therapy was carried out.

Results

One hundred fifty-seven patients were included in this study (Table 1): 53 had *T. cruris*, 66 had *T. pedis*, and 38 had *T. corporis*. The clinical cure rate was 96% and the mycologic cure rate, as shown by culture and microscopic examination, was 95%.

Negative culture was generally seen after 2 weeks. Pruritus disappeared completely after 2½ weeks and erythema after 3 weeks. The sum of all side effects (eg, dryness, burning, etc.) was 6%.

Discussion

The present study verifies the efficacy of 1% naftifine cream in the treatment of severe mycoses that, on the average, had persisted 29 weeks before treatment. No

Table 1. Basic and Amnastic Data

Age (yr)	6–70
Sex	
M	118
F	39
Causative agents	
Trichophyton ruborum	45%
T. mentagrophytes	19.4%
T. verrucosum	1.8%
T. schoenleinii	0.6%
T. violaceum	0.6%
Trichophytosis	0.6%
Microsporum	3.2%
Epidermophyton floccosum	6.3%
Candida albicans	15%
No growth	7.5%

Mean duration of infection before treatment: 29 weeks (maximum, 8 months).

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Table 2. Final Evaluation

Very effective	113 (72%)
Effective	38 (24%)
Not effective	6 (4%)

difference in efficacy as a function of the location of the infection could be found. The proportion of tinea cruris and *T. corporis* was found to be higher than that in central Europe; however, no difference in the spectrum of causative agents could be found. Between the different centers no differences were found in the spectrum of fungi or in the results of therapy.

It is possible that the relative severeness of the infections had a positive effect on patient compliance.

The side effects (6%) found in this trial were in the range of the results found in other studies.[6] Most of the side effects were nonallergic (eg, dryness in the case of interdigital mycoses).

Pruritus disappeared somewhat faster than erythema. This can be explained by the additional anti-inflammatory effect of naftifine.

Drug Name

1% naftifine: Exoderil

References

1. Zaun H, Luszpinski P. Antimykotische Behandlung unter Stationären Bedingungen-Halbseitenvergleich Zwischen Naftifin und Clotrimazol. Berlin: Verlag, 1985:59–65.
2. Haas PJ, Tronnier H, Weidinger G. Naftifin bei Fubmykosen Doppelblinder Therapievergleich mit Clotrimazol. Berlin: Verlag, 1985:67–74.
3. Nolting S, Weidinger G. Naftifin bei schweren Dermatomykosen-Kontrollierter Wirkungsvergleich mit Econazol. Berlin: Verlag, 1985:69–76.
4. Bojanovsky A, Haas P. Antimykotische Wirkung von Naftifin bei Tinea pedum. Munchen: Urban & Vogel GmbH, 1985:677–679.
5. El Darouti MA, Kalinka P. Naftifine cream 1% compared with miconazole cream 2% in dermatophytosis. Clin Trials. 1990;29.
6. Millikan LE, Wesley M, Galen K, et al. Naftifine cream 1% versus econazole cream 15 in the treatment of tinea cruris and tinea corporis. J Am Dermatol. 1988;18:52–56.
7. Hardyanto S, Soedirman S. A double blind clinical trial of naftifin cream versus tioconazol cream in dermatophytosis. Yogyakarta: Laboratory of Dermatology and Veneral Disease.
8. Darouti MA, Raubaie SAL, Shandrashekhar CR, et al. Double-blind randomized comparative study of naftifine cream and clotrimazole cream in the treatment of dermatophytosis. J Dermatol. 1989;28.
9. Dobson RL, Binder R, Hickmann JG, et al. Once-daily naftifine cream 1% (naftin) in the treatment of tinea pedis. Clin Trials. 1989;26.
10. Weidinger G, Striegel C, Meinicke K. Validierung des Einmaltäglich-Prinzips im kontrollierten Versuch. Berlin: Verlag, 1985:119–125.
11. Jung EG. Die antientzündliche Wirkung von Naftifin im UV-Erythem-Test. 1985.
12. Kecskes A, Jahn P. Nachweis der antiphlogistischen Wirkung von Naftifin-HCI im UV-B-Erythemtest. Berlin: Verlag, 1989: 158–160.
13. Tronnier H. Entzündliche Dermatomykosen Therapievergleich zwischen Naftifin und einem corticosteroidhaltigen Imidazol-Derivat. Berlin: Verlag.

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Food Allergy

In 1912, Schloss reported that a child who had had adverse reactions after eating certain foods had itching and redness at the site of scarification of the skin onto which drops of extracts from these foods had been applied. At about the same time, Talbot observed that children with asthma and eczema due to "egg poisoning" also had skin reactions to an extract of egg. Later, in 1921, Prausnitz and Küstner demonstrated that the factor responsible for sensitivity to fish was present in the serum of a fish-sensitive subject. This observation was the basis of the P-K test, now known to involve the passive transfer of antigen-specific IgE. The fish-sensitive subject was Dr. Küstner. These physicians were among the first to relate specific clinical reactions to foods to abnormal in vivo responses, now known to have an immunologic basis.

Adverse reactions to foods whose pathogenesis involves an immunologic response to the food components (primarily glycoproteins) are appropriately called food-hypersensitivity reactions—a term generally considered to be synonymous with "food allergy," although the latter term is often used to denote any unusual response to food. Food intolerance is an abnormal, nonimmunologic response to an ingested food that may be pharmacologic, toxic, or metabolic. Pharmacologic reactions to foods are the result of natural or added chemicals that produce an effect like that of a drug. Metabolic reactions result from the effect of the food on the metabolism of the recipient, and food toxicity is caused by toxins contained in the food or released by microorganisms contaminating the food product.—*Diseases of food hypersensitivity. N Engl J Med 1989;321:255–256.*