ISSN 0011-9059 CODEN IJDEBB

International Journal of Dermatology

Volume 36, Number 12 December 1997

The "Renaissance" of Dermatology, Montecatini Terme, Italy, March 26–28, 1998

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Blackwell Official publication of the Inte

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therapeutic potential in superficial and systemic mycoses. *Drugs* 1990; 39: 877–916.
2 Faergemann JF, Laufen H. Levels of fluconazole in serum, stratum corneum, epidermis–dermis (without stratum corneum) and eccrine sweat. *Clin Exper Dermatol* 1993; 18: 102–106.
3 Nada M, Said A. Efficacy and safety of single-dose oral fluconazole in the treatment of fungal skin infections. *Journal of Pan-Arab League of Dermatologists* 1991; 2: 165–173.
4 Del Aguila R, Montero-Gei F, Robles M, *et al.* Once-weekly oral doses of fluconazole 150 mg in the treatment of tinea pedis. *Clin Exper Dermatol* 1992; 17: 402–406.
5 Montero-Gei F and Perera A. Therapy with fluconazole for tinea corporis, tinea cruris and tinea pedis. *Clin Infect Dis* 1992; 14 (Suppl. 1): 577–581.
6 Farag A, Said A, Taha M, Wadie N. Oral fluconazole in the treatment of tinea cruris. *Journal of Pan-Arab League of Dermatologists* 1992; 3: 107–115.
7 Abdel-Aal MA, Kotb M, Said A. Fluconazole: a new drug for treatment of dermatomycoses. *Egypt J Dermatol Venereol* 1993; 13: 113–117.
8 Abd-Allah MA, El-Sayed MH, Rashid A, Said A. Oral single dose of fluconazole in the treatment of tinea corporis and tinea cruris. *Egypt J Dermatol Venereol* 1994; 14: 85–89.
9 Abou-Zeid S, El-Mansy I. Fluconazole, single weekly dose, in the treatment of tinea corporis and cruris. *Journal of Pan-Arab League of Dermatologists* 1994; 5: 121–124.
10 Suchil P, Montero-Gei F, Robles M, *et al.* Once-weekly oral doses of fluconazole 150 mg in the treatment of tinea corporis/cruris and cutaneous candidiasis. *Clin Exper Dermatol* 1992; 17: 397–40
11 Rekacewicz I, Guillaume JC, Benkhraba F, *et al.* Double blind placebo controlled study of a 2 per cent foaming lotion of ketoconazole in a single application in the treatment of pityriasis versicolor. *Ann Dermatol Venereol* 1990; 117: 709–711.

Clinical trial

Clarithromycin versus doxycycline in the treatment of rosacea

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Forty patients with rosacea were entered into a study comparing clarithromycin with doxycycline in the systemic treatment of mild and severe rosacea. The patients, 25 women and 15 men, aged from 26 to 62 years, were subdivided into two homogeneous groups with regard to age, sex, and disease severity. The first group of 23 patients, 14 women and 9 men, was treated with 250 mg of clarithromycin for 4 weeks twice daily, and then with 250 mg once daily for the following 4 weeks. The second group of 17 patients, 11 women and 6 men was treated with 100 mg of doxycycline for 4 weeks twice daily, and then with 100 mg once a day for the following 4 weeks. Both objective and subjective evaluations of the dermatosis were performed prior to therapy and after 4, 6, and 8 weeks of treatment.

Drug names
clarithromycin: Biaxin
doxycycline: Vibramycin

Objective evaluations

Erythema

The erythema status was assessed by a colorimetric technique performed on color prints of the patients.[1] This system (Minolta Cromameter model CR 300, Osaka, Japan) enables the measurement of the skin color. Variations of erythema are represented by a single numerical value.[1]

Telangiectases, papules, and pustules

The numbers and dimensions of telangiectases (TAE) were evaluated from the color prints and a score was assigned on the basis of the following scale: 0, no TAE; 1, less than five TAE located in the nasolabial sulcus and in the regio zygomatica; 2, 5–10 TAE located in the nasolabial sulcus and in the regio zygomatica; 3, between 10 and 20 confluents TAE; 4, 20–30 TAE, also diffused to the chin and forehead; 5, more than 30 TAE.

The numbers of papules and pustules were evaluated from the color prints and a score was assigned on the absis of the following scale: 0, no lesions; 1, less than 5 lesions; 2, 5–10 lesions; 3, 10–20 lesions; 4, 20–30 lesions; 5, more than 30 lesions.

Subjective evaluations

Each patient was requested to express a subjective evaluation about the efficacy and tolerability of the treatment by assigning a score based on a scale ranging from 0 to 5. *Efficacy*: 0, no efficacy; 1, low efficacy; 2, traceable efficacy; 3, mild efficacy; 4, good efficacy; 5, high efficacy. *Tolerability*: 0, no side-effects; 1, occasional symptoms; 2, many symptoms; 3, mild side-effects; 4, severe side-effects; 5, very serious side-effects (inducing patients to discontinue the therapy).

Statistical methods

Statistical evaluation of the data collected from clarithromycin-and doxycycline-treated patients was performed by univariate and multivariate statistical analyses.

The mean values of the erythema index in the two groups of patients were compared by a Student's *t*-test, after 4 weeks (T1), 6 weeks (T2), and 8 weeks (T3) of therapy.

Nonparametric testing of the differences between the mean values of the other variables under examination (TAE, papules, pustules, efficacy, and tolerability) was carried out by a Mann–Whitney *U*-test.

The homogeneity of the two groups of patients was assessed by comparison, prior to treatment, of the mean TAE values and papule and pustule variables (no significant difference was expected at T0).

In addition, a multivariate statistical analysis was performed. According to the discriminant function method, a new variable was calculated for each patient, as a linear combination of the values obtained for erythema, TAE, papules, and pustules. The mean values of this new variable in the two groups of patients were statistically compared at T1, T2, and T3 by analysis of variance.

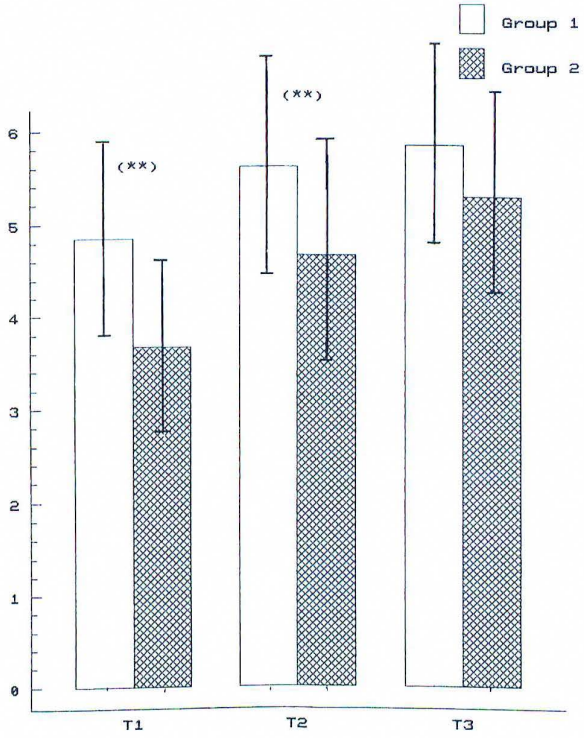

Figure 1 Erythema. Mean values of ΔE in clarithromycin-and doxycycline-treated groups of patients after 4, 6, and 8 weeks. At time T3, after 8 weeks of treatment, no significant difference was observed. Asterisks denote the level of statistical significance: $*P<0.05$; $**P<0.005$; $***P<0.0005$

Results

At the end of the treatment, the overall results provided evidence for a higher clarithromycin efficacy profile in comparison with doxycycline. The outcome assessment, based on the different parameters considered, revealed the following data.

Objective evaluations

Erythema (Fig. 1)

Figure 1 shows the significant difference ($P<0.005$) between the mean values of the erythema index in the two

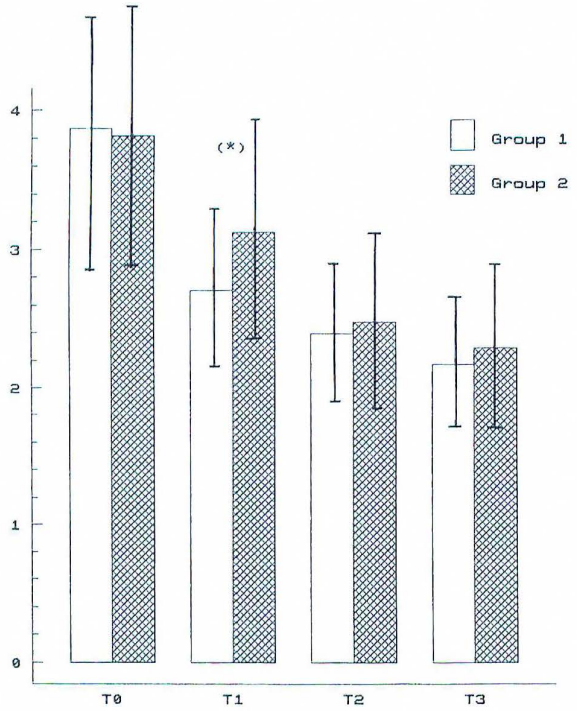

Figure 2 Telangiectases (TAE). Mean values of TAE score in the two groups of patients at T0 (before starting treatment), T1 (4 weeks of treatment), T2 (6 weeks of treatment), and T3 (8 weeks of treatment). Asterisks represent the level of statistical significance: $*P<0.05$; $**P<0.005$; $***P<0.0005$. the homogeneity of the two groups is indicated by the lack of statistical significance at time T0

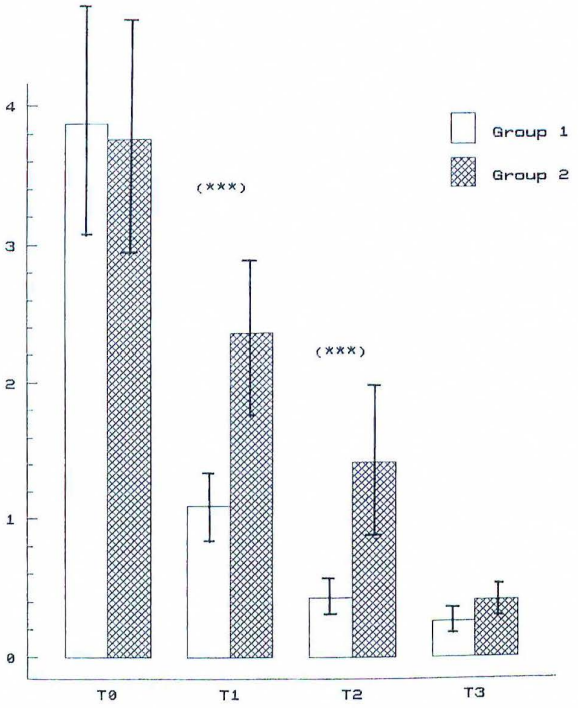

Figure 3 Papules. Mean values of papule score in the two patient groups before starting treatment (T0) and after 4 weeks (T1), 6 weeks (T2), and 8 weeks (T3) of treatment. The homogeneity of the groups is indicated by the lack of statistical significance at time T0. Asterisks represent the level of statistical significance: $*P<0.05$; $**P<0.005$; $***P<0.0005$

groups of patients observed after both 4 and 6 weeks of treatment (mean±standard error). At time T3, after 8 weeks of treatment, no significant difference was demonstrated.

Telangiectases (Fig. 2)
A significant difference ($P<0.05$) between the mean values of the specific score evaluating the numbers and dimensions of TAE in the two groups of patients was observed after 4 weeks of treatment. No significant differences were demonstrated at T2 and T3.

Papules (Fig. 3)
A significantly faster decrease ($P<0.0005$) of the mean score evaluating the number of papules was assessed in the clarithromycin-treated patients, when compared with the doxycycline-treated patients, after 4 and 6 weeks of therapy. No significant differences were found at T3.

Pustules (Fig. 4)
The results obtained from a statistical comparison between the mean values of the score evaluating the number of pustules were found to be strictly similar to those reported for the number of papules. A significant difference ($P<0.0005$) between the effects of the two regimens was assessed at times T1 and T2. A comparison of the mean values observed at the end of therapy did not reveal a level of statistical significance.

Subjective evaluations

Efficacy (Fig. 5)
No statistically significant differences were observed in the two groups of patients at T1, T2, and T3.

Tolerability (Fig. 6)
The total mean tolerability measured in Group 1 patients at the clarithromycin treatment rate used was equal to 0.32 (occasional side-effects). The total mean tolerability score measured in Group 2 patients at the doxycycline treatment rate used was equal to 1.06 (mild side-effects). A comparison of the mean values of the efficacy and tolerability

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