

Topical Treatment with Sulfur 10 per cent for Rosacea

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In a controlled study, topical treatment with sulfur 10 per cent is shown to be equally effective as orally given tetracycline in the management of rosacea. (Received January 30, 1984.)

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The conventional therapy for rosacea often means systemic administration of broad-spectrum antibiotics of the tetracycline group (2, 4). This treatment often results in a significant improvement, but the relapse rate is high following withdrawal of the drug. Erythromycin may be used instead of tetracycline, and lately metronidazole has been reported equally effective (1, 3). These systemic treatments have however well known side effects, and concerning metronidazole there has been discussions about its long-term safety, which makes the drug a less attractive alternative considering rosacea as a benign disease which often needs repeated treatment periods. There is an interest for a non-toxic, topically administered equally effective treatment.

Sulfur is a well known ingredient in topical treatment for rosacea, but rarely in concentrations as high as 10 per cent. However, according to John Strauss (5): "patients with rosacea have a good tolerance to precipitated sulfur which may be applied in concentrations of up to 15 per cent". Sulfur topically has for several years been our favoured treatment. Various concentrations and vehicles have been tried and it has been our impression that 10 per cent sulfur in Diprobase® (Essex Läkemedel, Schering Corp.) has been well tolerated and as effective as oral antibiotics. This clinical impression has now been tested in a double-blind study comparing topical treatment with orally given tetracycline.

MATERIAL AND METHODS

40 consecutive patients presenting with classical rosacea of different degrees of severity took part in the study. Patients were excluded if any treatment whether systemic or topical had been given during the preceding month. The patients were allocated to either regime 1 or 2 according to a randomization code:

Regime 1: 10 per cent sulfur cream topically combined with placebo capsules orally.

Regime 2: Lymecycline 150 mg capsules orally (Tetralsal®, Farmitalia Carlo Erba) combined with Diprobase® topically.

Treatment was given for four weeks. The patients were asked to apply the cream sparingly every evening all over the face, and to take two capsules twice daily for the first week and then one capsule twice daily for the subsequent three weeks.

Patients who failed to respond or got worse were switched over to the alternative treatment. This included those in whom symptoms recurred within the first four weeks after the treatment period. Initially and after four weeks the following variables were investigated:

1. The total number of papules/pustules within a defined area measured with a flexible frame—internal measurements 3.5 cm×2.5 cm—was counted. The same area was investigated at each visit.
2. Grade of erythema (none, slight, moderate, severe).
3. Clinical progress. The patients' and the clinicians' assessments were recorded and graded as: complete remission, much better, slightly better, unchanged, worse.

Patients were allotted to one of two doctors for the whole of the observation period. There was also made a note of any telangiectasia, nodules, or rhinophyma present.

Table I. Total number of papules/pustules in a defined area

	Sulfur	Tetracycline
Before treatment	213	143
Treatment 4 weeks	17	12
Difference	196	131

Table II. Relapse frequency within a follow-up period of 6 months

	Sulfur	Tetracycline
No change	11	7
Worse	8	9

RESULTS

37 patients (3 drop-outs) completed the trial (20 with regime 1, 17 with regime 2). Topical treatment was well tolerated. Patients receiving tetracycline recorded the well known dyspeptic side-effects. Statistical testing of the variables investigated showed no differences between the two groups, with the exception of the variable "total number of papules/pustules". The sulfur cream treatment produced a much greater reduction in these inflammatory components than the antibiotic treatment (Table I).

The study includes a follow-up period. Within the first six months after finishing therapy there is no statistical difference in relapse frequency between the two groups (Table II).

DISCUSSION

Systemic treatment of rosacea, although very effective, usually means prolonged treatment periods, which often have to be repeated, and thus with greater chances of side effects occurring. The alternative of an equally effective topical treatment seems much more attractive. The side effects of sulfur are of minor considerations and there are no contraindications. The trial in combination with years of clinical experience has convinced us of the excellency of 10% precipitated sulfur in Diprobase® for the treatment of rosacea.

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