SULFASALAZINE IN TREATMENT OF PSORIASIS

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A 5-lipoxygenase inhibitor-sulfasalazine was compared to a known effective drug-methotrexate in psoriasis. Fifteen patients each were put on sulfasalazine (1500 mg/day) and methotrexate (7.5 mg/week). Assessment was made on the basis of EST (Erythema, Scaling and Thickness) scale,initially and then weekly upto 4 weeks followed by 4 weekly upto 12 weeks. Efficacy was comparable for the 2 drugs: decrease in mean EST in patients on methotrexate and sulfasalazine therapy was 86.55% and 83.64% at 4 weeks; and 92.86% and 92.13% at 12 weeks respectively. Nine patients on sulfasalazine therapy and 10 patients on methotrexate therapy had complete clearance at the end of 12 weeks.

Key Words: Lipoxygenase inhibitor, Methotrexate

Introduction

A possible pathogenetic role in psoriasis of arachidonic acid 5-lipoxygenase product leucotriene B4 has been proposed[1] and subsequently 5-lipoxygenase inhibitors have been tried in psoriasis. This study was planned to asses the efficacy of sulfasalazine, a 5-lipoxygenase inhibitor, vis-a-vis methotrexate, an established drug for treating psoriasis.

Materials and Methods

Thirty psoriasis patients with >20% body surface area involvement (determined by Wallace's rule of nine) were selected for this trial.

Informed consent was obtained from the patients. The cases selected had not taken any specific systemic therapy for the past 6 weeks, and their routine investigations were within normal limits. They were randomly assigned to one of the 2 groups:

Group A included 15 patients who were treated with methotrexate 7.5 mg/ week (in 3 equal divided doses at 12 hour intervals).

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Group B: included 15 patients who were treated with sulfasalazine 500 mg three times a day. All the patients were given local application of a combination of beclomethasone (0.025%) and salicylic acid (3%) not exceeding 50g/week; and/or tar shampoo on alternate days for scalp lesions

The response was recorded using EST scale (Table I) based on the parameters E-erythema, S-scaling and T-thickness-graded from 0 to 3. The recording was done every week for first 4 weeks and then at 8 and 12 weeks.

Table I. EST grading

	Severe	Moderate	Mild	Absent
Erythema (E)	3	2	1	0
Scaling (S)	3	2	1	0
Thickness (T)	3	2	1	0

Results

Group A included 8 male and 7 female patients, with ages ranging from 20 to 68 years (average 46.4 years). Group B included 7 male and 8 female patients with ages ranging from 12 to 70 years (average 35.6 years).

One case in group A was diabetic and another case in group B was hypertensive. No case had any other abnormality on clinical examination or laboratory tests.

In group A mean EST score decreased from 8.4 at the start of treatment to 1.13 (ie by 86.55%) at 4 weeks and to 0.6 (ie by 92.86%) at 12 weeks. Seven (46.7%) patients had complete clearance by 4 weeks, while a further 3 (20.0%) patients had complete clearance by 12 weeks.

In group B mean EST score decreased from 8.13 initially to 1.33 (ie by 83.64%) at 4 weeks and to 0.64 (ie by 92.13%) at 12 weeks.

In study group B, 1 patient (who was an alcoholic) was found to be having cirrhosis at 3 weeks and was excluded from further study. Out of the remaining 14 patients, 7 (50%) had complete clearance by 4 weeks and a further 2 (14.3%) by 12 week. One patient in this group had a deterioration while on therapy.

No case in group B had any subjective or objective side effects.

In group A, 3 cases had minor increases in SGOT and SGPT levels. They were being kept under close observation and the treatment was continued.

Discussion

Leucotriene B4, a 5-lipoxygenase byproduct, has a possible pathogenetic role in psoriasis. Inhibitors of its synthesizing enzyme 5-lipoxygenase, like sulfasalazine or benoxaprofen have been found to benefit patients with moderate to severe psoriasis. An open study of oral sulfasalazine indicated that it may be effective in psoriasis.[2]

The present study found sulfasalazine to be effective in psoriasis and its efficacy was comparable to methotrexate. Moreover, its safety was projected by the absence of any side effects in comparison to methotrexate, a potentially toxic drug.

Sulfasalazine (salicylazosulfapyridine) is widely used in ulcerative colitis, enteritis, and other inflammatory bowel diseases. It is split by intestinal microflora to yield sulfapyridine and 5 aminosalicylic acid (5ASA).[3] Whereas 5ASA has an antiinflammatory effect, the sulfapyridine moiety only carries 5ASA to the colon and it is this moiety which is responsible for adverse effects like rashes, fever, joint pains, haemolysis, blood dyscrasias and male infertility. 5ASA is absorbed, acetylated in liver and excreted in urine, and may have side effects like nausea diarrhoea, headache and rarely rashes and hypersensitivity reactions.[4] Further studies should be conducted on larger number of patients and with longer duration of follow up to establish the efficacy and long term safety of sulfasalazine (and its derivatives) in psoriasis.

References

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