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RIFAMPICIN AND DAPSONE IN SUPERFICIAL PUSTULAR FOLLICULITIS

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Fifty male patients diagnosed to have superficial pustular folliculitis (SPF) were included in an open trial to study the effects of rifampicin vs dapsone. Rifampicin, in a dose of 10mg/kg body weight for a period of 8 weeks was given for 25 patients in phase I and the drug cleared the lesions in 72%. Dapsone in a dose of 100 mg/day produced moderate response in 20% only. 17 patients who did not clear with dapsone were started on rifampicin (phase II) and 7/17 showed marked improvement. Remissions with rifampicin ranged from 3-9 months or longer. In patients who relapsed, a second course of the drug was effective.

Key Words : Dapsone, Folliculitis, Rifampicin

Introduction

Superficial pustular or chronic folliculitis (SPF) is the result of inflammatory changes confined to the ostium and heals without scar formation. This condition is very common in day-to-day practice. Clinically, it manifests as small follicular papules or pin-head size pustules. Young adult males are predominantly affected. *Staph aureus* was regularly isolated from the lesions. Among the various types of folliculitis, SPF of the legs is the most common type seen in our country, which may persist for many years and become resistant to treatment.[1,2] Though the lesions are predominantly seen on the legs, this may extend to involve the thighs and forearms.[3] Apart form using conventional antibiotics, PUVAsol, PUVAsol with cotrimoxazole, and ciprofloxacin have been tried with varying results.[4,5]

However, a successful form of therapy is yet to evolve in this disease. Since *Staph aureus* is the aetiologic agent, which is highly sensitive to rifampicin, this drug was considered in an open trial. Dapsone, a bacteriostatic drug, is known to inhibit neutrophils and is indicated in many dermatological disorders.[6] In the present study, dapsone was tried in pustular folliculitis as an alternate drug.

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Materials and Methods

Fifty consecutive male patients attending the dermatology out patient clinic of Rajah Muthiah Medical College and Hospital during the period from August 1993 to July 1994 were included in the study. All relevant demographic factors were entered in a proforma. The type, number of lesions, sites affected were all noted down. Baseline investigations and liver function tests were done in all patients. Pus culture and sensitivity was done whenever possible. The patients were divided into two groups. Every alternate patient was treated with rifampicin at a dose of 10mg/kg body weight and dapsone 100mg per day for eight weeks. The response was assessed at the end of 4th and 8th weeks. If patients did not show any subjective or objective improvement within 8 weeks, they were crossed over to the next drug, after a drug-free interval of 2 weeks, and the study was continued for a further period of 8 weeks. The patients were followed up at monthly intervals after complete resolution and new lesions were treated with rifampicin for another period of

8 weeks or till the lesions resolved. The response to therapy was graded as follows :

Grade 0 : No improvement
Grade 1 : 25% improvement
Grade 2 : 50% improvement
Grade 3 : 75% improvement
Grade 4 : Complete clearance

Results

Rifampicin at a dose of 10mg/kg body weight was given to 25 patients for a maximum period of 8 weeks. Four patients dropped out of the study. 72% (18 patients) showed a remarkable recovery ie, resolution of all the lesions (grade IV response). 8% showed a moderate response (grade II) and 4% showed no response (grade 0) (Fig.1 and Table I).

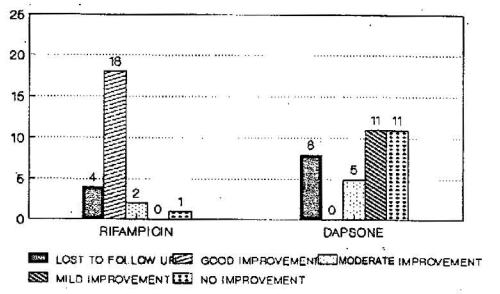

Fig. 1. Comparision of rifampicin and dapsone.

Table I. Therapeutic trial with rifampicin and dapsone

Response	Rifampicin N=25	Dapsone N=25	Phase II Rifampicin N=17
Complete	72%	-	41%
Moderate	8%	20%	53%
Mild	-	4%	-
No reponse	4%	44%	6%
Lost to follow up	16%	32%	-

Among the 25 patients who were given dapsone, 8 (32%) were lost to follow up. Among the rest, the drug could not produce complete resolution in any of them. Only 20% showed a moderate response (grade II) and 4% a mild response (grade I). The drug did not produce any significant response in 11 (44%) patients (grade 0).

All the 17 patients who did not respond to dapsone after 8 weeks, were given rifampicin after a drug-free interval of 2 weeks. Seven patients showed remarkable improvement with rifampicin (grade IV), one patient did not show any response and the rest had moderate improvement only.

Relapse of the lesions was seen in 15 out of 42 patients who were put on rifampicin. Seven out of 15 had recurrence within 3 months. Three patients had within 3-6 months and 5 patients noticed within 6-9 months. Two out of 15 patients had multiple recurrences. All relapsed patients except one, also responded completely (grade IV) to the second course of rifampicin for another 8 weeks. One patient who did not show improvement with either drug, was tried on PUVA therapy with unsuccessful response.

Duration of illness was compared with response to therapy. Among 8 patients who had disease for more than 6 years, 3 were lost to follow up. Among the rest, 2 were started on rifampicin therapy with good response (grade III); the other 3 showed a mild to moderate response to dapsone (grades I and II), and were changed to rifampicin after which there was a clinical cure.

Staph aureus was isolated from all the patients who cleared with rifampicin. One patient who did not respond to the drug, grew *Pseudomonas*.

Discussion

Wheat et al studied the long term effect of rifampicin on nasal carriage of coagulase positive staphylococci and claimed oral rifampicin at a dose of 600 mg daily for 7-10 days cleared the organism for 3 months in 80% of cases.[7] This formed the basis for our study. Our series also revealed 89% response with 8 weeks of therapy. Even though the recurrence rate was 42%, the period of remission lasted from 2-9 months and a second course of rifampicin for the same duration or less, cleared the lesions in all of them except one. The patients also had a mild form of the disease during the relapse. Our study clearly points out the effect of rifampicin which could be used as a first line drug in the treatment. However, this should be confirmed by performing large scale multi-centre studies with long term follow-up. There is no correlation between the duration of illness and the response to therapy. As we are living in an endemic country, tuberculosis was excluded in all patients by appropriate clinical and laboratory parameters before starting rifampicin therapy. Liver function tests, done as a routine, did not show any abnormality.

Dapsone, when given, produced no significant results in the study group.To conclude,

1) 89% of patients with SPF respond to a course of rifampicin for 8 weeks.

2) Rifampicin also produces complete remissions in 1/3 of patients, and partial remissions for a prolonged period in the rest.

3) Dapsone is ineffective in SPF.

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