



Comaprison of Permethrin 5% Cream Versus Ivermectin in the Treatment of Scabies.

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KEYWORDS

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ABSTRACT:

Background: Scabies is a common infestation caused by the scabies mite, *Sarcoptes scabie var hominis*. It is highly contagious usually affecting all the members of a household. It is of public health importance as more than 100 million people are believed to be affected world wide. Permethrin 5% is considered to be the mainstay of treatment, however oral ivermectin is also believed to be efficous.

Aims and Objective: The study was carried out to compare the efficacy of permethrin 5% versus oral ivermectin in the treatment of scabies.

Materials and methods: A total of 120 patients with scabies who attended the out patient department of Civil Hospital, Dharwad between Jan 2022 to Jan 2023 were included in the study. The patients were divided into two groups of 60 each .. One group was given topical Permethrin 5% cream and other group was given oral ivermectin 12 mg two doses 2 weeks apart. They were evaluated at 2 weeks and 4 weeks for resolution of their syptoms.

Results: At the end of two weeks 42 out of 60 patients treated with permethrin 5 % cream had resolution of their syptoms and 38 out of 60 patients treated with oral ivermectin had resolution of their symptoms. At the end of 4 weeks 51 patients treated with permethrin 5% had resolution of syptoms and 50 patients treated with oral ivermectin had resolution of their symptoms. The study showed that both topical permethrin and oral ivermectin are equally effective in the treatment of scabies with no statistical significance between the two.

Conclusion: Both oral ivermectin and topical permethrin 5% are effective in the treatment of scabies. Oral ivermectin should be preferred as the it is more convenient and has better compliance as compared to topical Permethrin 5%.

INTRODUCTION

Scabies is a global problem especially in the developing countries such as India and Africa. Predisposing factors include homelessness, overcrowding, poor hygiene and immunodeficiency states ¹.It mainly affects children below the age of 2 years however any age group can be affected The incidence is more in winter as there is more overcrowding. It commonly affects all inmates of a hostel room, orphanages or jail cell and all members of a household. The mainstay of treatment of scabies has been topical permethrin 5 % cream. The method of

application of the cream is however not very convenient as it has to be applied to all parts of the body and to take bath after 8 hours².All clothes worn by the patient are to be washed in warm water. Single application of Permethrin 5% is considered to be 95% efficous. The application may be repeated after 2 weeks if there is persistence of symptoms.³This may result in poor compliance and hence the need for other drugs. Ivermectin is the only oral drug for the treatment of scabies .The convenience is its oral formulation and



hence better compliance. Different studies have shown good response.⁴

AIMS AND OBJECTIVES

To study the demographic and epidemiological profile of patients with scabies. To assess the efficacy of permethrin 5% cream in comparison to oral ivermectin. To study the safety profile of permethrin 5% cream and oral ivermectin.

MATERIALS AND METHODS

The study was a single blind randomized controlled trial carried out in the outpatient department of Civil Hospital, Dharwad between Jan 2022 to Jan 2023. A total of 120 patients were included in the study. The patients were divided into two groups A and B each of 60 patients. Demographic details such as weight, age and sex were recorded. A detailed clinical examination and history was taken to confirm the diagnoses of scabies. Group A was given Permethrin 5% cream and the Group B was given Oral ivermectin 12mg. The patients were given instructions of the method of application of the permethrin 5% cream and to repeat the application after one week. The second group was instructed to take oral ivermectin and repeat the dose after 2 weeks.

Inclusion criteria

All patients above the age of 14 who presented with clinical features suggestive of scabies which include itching, burrows, scratch marks, papules, vesicles.

Exclusion criteria

1. Patients who have history of allergy to permethrin or ivermectin.
2. Patients who have been treated with antiscabies medication in the past one month.
3. Pregnant patients
4. Patients with Norwegian scabies
5. Patients taking oral antibiotics

RESULTS

There was no significant difference in the age or sex between the two groups. At the end of 2 weeks in Group A 18 patients had persistence of symptoms where as in Group B 22 patients had persistence of symptoms. At the end of 4 weeks after repeat treatment 9 patients in group A had persistence of symptoms and 10 patients in

Group B had persistence of symptoms. The efficacy was 70% in group A at the end of 2 weeks and 85% at the end of 4 weeks. The efficacy was 63% in group B at the end of two weeks and 83% at the end of 4 weeks. Both creams were found to be effective at the end of 4 weeks with no statistical significance between the two groups. There was no adverse effect with use of either permethrin 5% or oral ivermectin.

Table: Resolution of symptoms

	2 weeks	4 weeks
Group A(5%Permethrin)	42(70%)	51(85%)
Group B(oral ivermectin)	38(63%)	50(83%)

DISCUSSION

There are a number of treatment options for treating scabies which include 5% permethrin, lindane lotion, sulphur, crotamiton and benzoyl benzoate.⁶ Among these permethrin 5% cream has high efficacy and good safety profile. The only oral treatment for scabies is oral ivermectin. Permethrin cream acts by causing sodium channel paralysis,⁶ it is safe in children even in infants as young as 2 months. It is safe in pregnancy. Ivermectin of the other hand is not recommended in children younger than 13 years because of the risk of convulsions. Ivermectin acts by paralyzing glutamated chloride channels. Ivermectin is available in both topical formulation and oral tablets.^{7,8}

Our study showed resolution in 85% of patients in the permethrin 5% cream treated group at the end of 4 weeks. This is comparable to the study by Mallya *et al.*⁹. The resolution in the ivermectin treated group was 83% at the end of 4 weeks, this is comparable to the study by Sharma *et al.*¹⁰

There were no adverse effects in both study groups comparable to the studies by Sharma *et al.*¹⁰

CONCLUSION

The study showed that both ivermectin and Permethrin 5% cream are effective in the treatment of scabies. The efficacy is higher after second dosage as compared to the first dosage. We would recommend use of ivermectin



as the ease of taking the medication and better compliance.

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