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ORIGINAL ARTICLE

EFFECT OF MACROLIDE ON PITYRIASIS ROSEA IN COMPARISON WITH ACYCLOVIR

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ABSTRACT: Pityriasis rosea is characterized by an acute, self-limiting, distinctive papulo squamous skin eruption with minimal constitutional symptoms. This study is a prospective study conducted in department of dermatology Konaseema institute of medical science Amalapuram Andhra Pradesh from January 2011 to December 2014. Patient above 10 years of age without history of prior treatment were included into the study as per inclusion and exclusion criteria. At the end of 4th week all the subjects (100%) of group A had complete response. Among the group B subjects 53.33% had partial response and 46.67% had complete response where as in group C subjects, 66.67% had partial response and only 33.33% had complete response. Response is best in group A followed by group B and group C and this is statistically significant (χ^2=31.11, Þ=0.0000). In our study Macrolide is not as effective as Acyclovir in the treatment of PR. As the etiological information regarding PR is not clear and Macrolide has some anti-inflammatory effect so this thing to be evaluated before coming to conclusion regarding their efficacy in the treatment of PR.

KEYWORD: Pityriasis rosea, acyclovir, macrolide.

INTRODUCTION: Pityriasis rosea is characterized by an acute, self-limiting, distinctive papulo squamous skin eruption with minimal constitutional symptoms. To start with there will be herald or mother patches appears particularly on trunk, upper arms, neck or thigh. One to two week later oval, dull pink scaly itches macules will appear and in most of the people it recovers within 5 to 8 weeks.(1) Etiology of this disease is not clear but streptococci, legionella, spirochetes, fungi and virus especially HHV6 and HHV7 has been implicated. PR is a self-limiting disease but because of extensive rash, prolong duration, and uncertain etiology various therapeutic agent has because used for the treatment of this disorder like, bland emollients, antihistamine, oral corticosteroid in severe cases, Dapsone, acyclovir and macrolide. Various studies have been conducted regarding efficacy of erythromycin in PR, with both either positive response or no response the present study is conducted to know the efficacy of erythromycin and clarithromycin in comparison with acyclovir in pityriasis rosea in costal Andhra Pradesh.

MATERIAL AND METHODS: This study is a prospective study conducted in department of dermatology Konaseema institute of medical science Amalapuram Andhra Pradesh from January 2011 to December 2014.Permission from institutional ethics committee has been taken prior to starting of study. Informed consent was obtained from patient on standard format. During this three year period ninety patients were enrolled for study.

INCLUSION CRITERIA: Patient above 10 years of age without history of prior treatment were included into the study. Diagnosis was made with the help of two senior faculty of dermatology based on clinical characteristic of pityriasis rosea.

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EXCLUSION CRITERIA:

- Pregnancy.
- Renal failure.
- H/O hyper sensitivity to Macrolide.

Patients enrolled into study we allocated into three group A, B and C randomly. Group A patient were given Acyclovir dose as per the body wt. of the individual, group B were given Erythromycin and group C were received Clarithromycin. Patients were evaluated after 1st week, 2nd week, 4th week and 6th week by same dermatologist and response of treatment was recorded in the form of No response (NR), Partial response (PR) and complete response (CR). Chi–square test was used for statistical analysis of the data.

RESULT: Ninety patient allocate into three group were evaluated regularly by same dermatologist at 1st week, 2nd week, 4th week and 6thweek. Patient receiving Acyclovir, allocated in group A, after 1st week there was partial response for all the patient after 2nd week 10 patient were completely cured and 20 patient have partial response after 4th week on ward all Patient were completely cured. Patient receiving Erythromycin in group B after 1st week 9 patient have no response, 21 Patient have response 2nd week 6 have complete cure 24 have partial response after 4th week 16 have partial response and 14 have complete response after 6th week 8 have partial response 22 have no response. In group C Patient taking Clarithromycin 1st week 10Patient have no response but 20 have partial response, in 2nd week 26 patient have partial response and 4 Patient having complete response in 4th week 22 Patient having partial response eight Patient having complete response and 6th week 18 Patient having partial response 12 Patient having complete response.

At the end of 1st week, none of the subjects had complete response. All the subjects of group A (100%) had partial response, 30% of subjects partial response and among group C subjects, 33.33% had no response and 66.67% had partial response. Response was better in group A than group B and group C and this is statistically significant (χ^2=12.14, Þ=0.0023).

At the end of 2nd week 66.67% subjects of group A had partial response and 33.33% had complete response. Among the group B subjects 80% had partial response and 20% had complete response where as in group C subjects 86.67% had partial response and only 13.33% had complete response. Response is better in group A than group B and group C though this is not statistically significant (χ^2=3.6, Þ=0.1653).

Parameters		Group A	Group B	Group C
Age	10-20 yrs	4	5	4
	20-30 yrs	20	24	18
	>30 yrs	6	1	8
Sex	M	18	16	19
	F	12	14	11
Family History	-	NO	NO	NO
Sexual Content	-	4	8	4
URTI	-	14	10	12

Table 1

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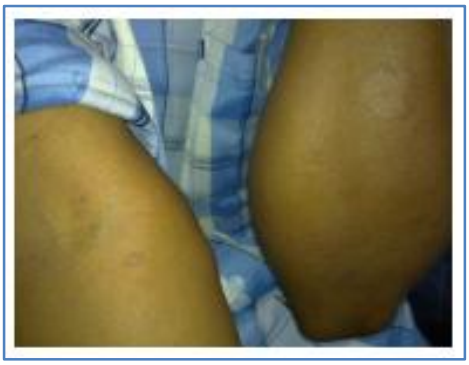

Fig. 1

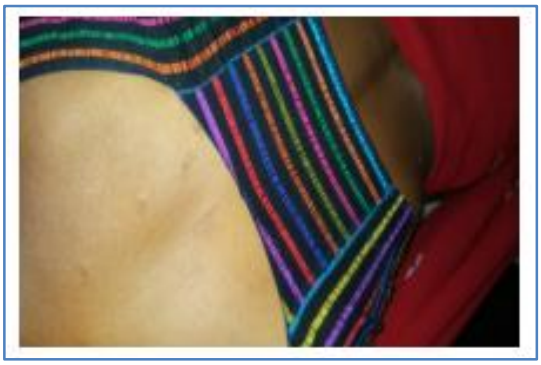

Fig. 2

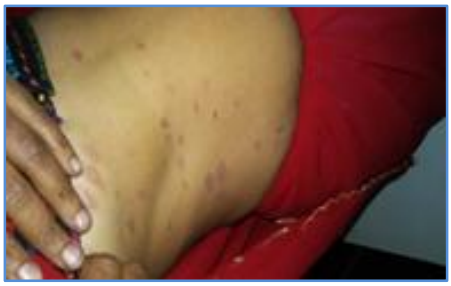

Fig. 3

Total Group Size (90)	1st Week			2nd Week			4th Week			6th Week		
	NR	PR	CR	NR	PR	CR	NR	PR	CR	NR	PR	CR
Group A	0	30	0	0	20	10	0	0	30	0	0	30
Group B	9	21	0	0	24	6	0	16	14	0	8	22
Group C	10	20	0	0	26	4	0	24	6	0	18	12

Table 2: Response to Treatment in various Group

At the end of 4th week all the subjects (100%) of group A had complete response. Among the group B subjects 53.33% had partial response and 46.67% had complete response where as in group C subjects, 66.67% had partial response and only 33.33% had complete response. Response is best in group A followed by group B and group C and this is statistically significant (χ^2=31.11, Þ=0.0000).

DISCUSSION: In this study we have tried to compare the effect of three drugs Acyclovir, Erythromycin and Clarithromycin. We have found that out of these three drugs Acyclovir is better than both Macrolide when it comes the comparison of both Macrolide, Erythromycin is better than Clarithromycin. As we know that pityriasis rosea has viral etiology so acyclovir has better response found in other study also.[5,6,7]

Literature also says that Macrolide have anti-inflammatory effect. Apart from antibacterial effects, macrolides have effects on neutrophil function (Decreased oxidant production, apoptosis) and on the production of cytokines involved in the inflammation cascade (Decreased production of IL-1, IL-

6, IL-8, and TNF and increased production of IL-10 and, possibly, IL-4). With regard to T lymphocytes, erythromycin (EM) and its derivatives inhibit T-lymphocyte proliferation and induce T-lymphocyte apoptosis.[8,9] Various studies have been conducted regarding use and efficacy Macrolide PR.[10,11,12,13]

In some of the study Macrolide was found to be effective, but this is not proved in our study, because complete clearness was poor in both Macrolide as such this patches used to set cleared between 3 weeks to 6 weeks. Acyclovir is effective and better than Macrolide because response was better even in 2nd week of treatment.

CONCLUSION: Macrolide was found effective in the treatment of pityriasis rosea in same studies. In our study Macrolide is not as effective as Acyclovir in the treatment of PR. As the etiological information regarding PR is not clear and Macrolide has some anti-inflammatory effect so this thing to be evaluated before coming to conclusion regarding their efficacy in the treatment of PR.

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