VALUE OF GRISEOFULVIN IN THE TREATMENT OF HERPES ZOSTER

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Griseofulvin was isolated in 1939 from Penicillum Griseofulvin. Its effectiveness against fungi in both plants and animals led Gentles (1958)[1] to use this drug successfully in intractable ring worm infections in man. Other workers have studied its therapeutic efficacy in various other disease both cutaneous and systemic. With a view to determining its anti-inflammatory action, it was tried in Shoulder-Hand syndrome (1960)[2] and again because of the similarity of its structural formula to Colchicin, it was tried in gout with moderate success (1960-63).[3 A, B] A decrease in the frequency of attacks of angina pectoris was observed in all the 10 cases (1963).[4] Other diseases where this drug has been tried are syphilitic keratoderma of palms (1962)[5] and psoriasis of nails (1960).[6 A, B] T.Bile(1963)[7] tried griseofulvin in leprosy and reported improvement. Randazzo et at (1964)[8] reported that griseofulvin is effective in rheumatic diseases and gout. Mulay, Ahuja et al (1969)[9] tried this drug on 19 patients suffering from Herpes Zoster and reported remarkable and dramatic relief in all the patients. Tirlea capilsan (1969)[10] et al also tried this drug in Herpes Zoster and reported good results.

We have further tried this drug in a larger group of patients suffering from Herpes Zoster and compared the results with another group receiving the usual type of therapy like local application of lotio calamina or Gentian violet 1 to 2%, injections of vitamins B_1 & B_{12} and analgesics.

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MATERIAL AND METHODS

Cases of Herpes Zoster attending Skin OPD, Willingdon Hospital, New Delhi during the year 1969-70 were taken on the project. A group of patients were given tablets of Griseofulvin F. P. - 125 mg - 2 tablets three times a day to adults. Another group of cases were given the usual type of treatment. We had initially included 100 cases in each series. But during the course of treatment 35 patients from the experimental group and 50 cases from the control group discontinued the treatment and have thus been excluded from this report. Data regarding age, sex and duration of the lesion was recorded. Cases were observed thereafter every alternate day for a total period of 8 days.

Patients in the experimental group were instructed to avoid any other oral or topical medication.

Data collected:

Number of cases treated with Griseofulvin	100
Number of control cases treated with usual treatment	100
Number of cases in the experimental group who failed to report for a 8 days observation.	35
Number of cases in the control group who failed to report for 8 days observation.	50

Cases studied for full period:

i.	Experimental group	65
ii.	Control group.	50

Table 1—Showing improvements in 'Burning' in experimental and control cases of Herpes Zoster.

Total experimental cases 65 Total control cases 50

Observed on		IMPROVEMENT Less than 25%	25-49%	50-74%	75-99%	100%	No improvement	Total cases
2nd day	Exp.	18 24.6%	13 20.0%	6 9.7%	2 3.1%	4 6.2%	22 33.6%	65
	Cont.	—	—	—	—	—	50 100%	50
4th day	Exp.	5 7.6%	20 30.8%	10 15.4%	9 13.8%	9 13.8%	12 18.5%	65
	Cont.	3 6%	2 4%	—	—		45 90%	50
6th day	Exp.	—	4 6.0%	12 18.5%	10 15.3%	33 50.7%	6 9.3%	65
	Cont.	10 20%	9 18%	6 12%	—		25 50%	50
8th day	Exp.	—	1 1.5%	1 1.5%	3 4.6%	60 92.3%		65
	Cont.	9 18%	12 24%	14 28%			15 30%	50

Table 2—Showing improvement in 'Pain' in experimental and control cases of Herpes Zoster.

Observed on		IMPROVEMENT Less than 25%	25-49%	50-74%	75-99%	100%	No improvement	Total cases
2nd day	Exp.	12 18.5%	12 21.4%	11 16.8%	4 6.2%	4 6.2%	20 30.6%	65
	Cont.	—	—	—	—		50 100%	50
4th day	Exp.	6 9.3%	16 24.5%	12 18.5%	8 12.3%	12 18.5%	11 16.8%	65
	Cont.	4 8%	6 12%	—	—		40 80%	50
6th day	Exp.	2 3.0%	5 7.6%	6 9.3%	8 12.3%	38 58.2%	6 9.3%	65
	Cont.	4 8%	7 14%	6 12%			33 66%	50
8th day	Exp.	—	—	4 6.2%	4 6.2%	57 87.8%	—	65
	Cont.	14 28%	16 32%	10 20%	—	—	10 20%	50

It will be seen from the Table No. 1 that 92.3% of cases showed complete improvement and remaining 7.7% cases in the experimental group showed a varying degree of reliefs on the 8th day as compared to 70% cases showing less than 75% improvement and 30% showing no improvement in the control group.

19% cases in the experimental group showed 50% or more than 50% improvement in burning on the 2nd day of treatment as compared to nil in the control group.

Table No. 2 shows that 100% improvement in pain was seen in 87.8% and 75% to 99% in 6.2% of cases on the 8th day in the experimental group as compared to nil in this improvement range in the control group.

6.2%, 18.5%, 58.2% and 87.8% cases showed 100% improvement in pain on the 2nd, 4th, 6th and 8th day respectively as compared to nil in the control group.

A sharp contrast in the rate of improvement between experimental and control group will be observed during the whole period of observation of 8 days.

Table 3—Showing improvement in 'Erythema' in experimental and control cases of Herpes Zoster.

Observed on		IMPROVEMENT Lees than 25%	25-49%	50-74%	75-99%	100%	No improvement	Total cases
2nd day	Exp.	11 16.9%	12 18.4%	12 18.4%	1 1.5%	9 13.6%	20 30.6%	65
	Cont.	—	—	—	—	—	50 100%	50
4th day	Exp.	2 3%	25 38.3%	6 9.3%	5 7.7%	15 23%	12 18.5%	65
	Cont.	1 2%	3 6%				46 92%	50
6th day	Exp.	3 4.6%	6 9.3%	4 6.2%	4 6.2%	40 61.2%	8 12.3%	65
	Cont.	6 12%	4 8%	2 4%			38 76%	50
8th day	Exp.	—	—	1 1.5%		64 98.5%	—	65
	Cont.	3 6%	7 14%	10 20%			30 60%	50

It will be observed from the table above that 33.5% cases in the experimental group showed 50-100% improvement on the 2nd day of observation as compared to nil in the control group and 98.5% cases showed 100% improvement on the 8th day, as compared to 20% in control group.

13.6%, 23%, 61.2% and 98.5% showed 100% improvement in the experimental group on 2nd, 4th, 6th, and 8th day respectively as compared to nil in the control group.

60% cases in the control group even on 8th day showed no improvement in erythema.

Table 4—Showing improvement in 'Vesiculation' in experimental and control cases of Herpes Zoster.

Observed on		Less than 25%	25-49%	50-74%	75-99%	100%	No improvement	Total cases
2nd day	Exp.	23	14	10	1	9	8	65
		35.2%	21.4%	15.3%	1.6%	13.6%	12.8%	
	Cont.	—	—	—	—		50	50
							100%	
4th day	Exp.	6	15	10	1	18	15	65
		9.3%	23%	15.3%	1.5%	27.6%	23%	
	Cont.	1	1				48	50
		2%	2%				96%	
6th day	Exp.	—	6	8	2	42	7	65
			9.3%	12.3%	3.0%	64.3%	10.7%	
	Cont.	2	2	1			45	50
		4%	4%	2%			90%	
8th day	Exp.	—	—	3	2	60	—	65
				4.6%	3.0%	92.3%		
	Cont.	4	6	8			32	50
		8%	12%	16%			64%	

Table above shows that 13.6% cases showed 100% improvement in vesiculation on 2nd day of treatment and 8th day 92.3% cases had shown similar improvement in the experimental group as compared to nil in the control group. A contrasting rate of improvement in various other ranges was observed in the two groups of experimental and control cases.

Only 16% cases in the control group showed 50-74% improvement on 8th day in the vesiculation.

Table 5. Showing total percentage 'Overall' improvement in the various signs and symptoms of experimental and the control groups of Herpes Zoster on the 8th day.

		IMPROVEMENT					
		Less than 25%	25-49%	50-74%	75-99%	100%	No improvement
Burning	Exp.	—	1	1	3	60	—
			1.5%	1.5%	4.6%	92.3%	
	Cont.	9	12	14	—	—	15
		18%	24%	28%			30%
Pain	Exp.	—	—	4	4	57	—
				6.1%	6.1%	87.8%	
	Cont.	14	16%	10			10
		28%	32%	20%			20%
Erythema	Exp.	—	—	1		64	—
				1.5%		98.5%	
	Cont.	3	7	10	—		30
		6%	14%	20%			60%
Vesiculation	Exp.	—	—	3	2	60	—
				4.6%	3.0%	92.3%	
	Cont.	4	6	8			32
		8%	12%	16%			64%

It will be observed from the above table that on the 8th day 87.8% cases showed a full recovery from all the signs and symptoms of Herpes Zoster in the experimental group as compared to none in the control group.

100% improvement in burning, pain, erythema and vesiculation in the experimental group was observed in 92.3%, 87.8%, 98.5%, 92.3% cases respectively as compared to nil in the control group. 1.5% - 16% cases in the control group showed over all improvement in the range of 50 - 74% after 8 days in the various signs and symptoms and 20 - 64% cases showed no improvement at all.

Summary and Conclusion

A detailed and controlled study on the treatment of Herpes Zoster with Griseofulvin is presented.

A review of literature indicates that Griseofulvin has been used beneficially in a variety of cutaneous and systemic diseases.

Patients suffering from Herpes Zoster showed a remarkable improvement in a much shorter period when treated with Griseofulvin than in control cases. It has been observed that Griseofulvin arrests the disease process, reduces morbidity and minimises the incidence of post herpetic neuralgia.

The mode of action of griseofulvin in diseases other than dermatomycosis is not documented so far.

RESPONSE TO TREATMENT CASE I

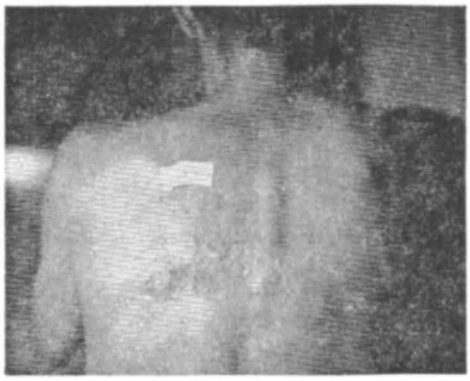

Fig. 1
2nd day of treatment

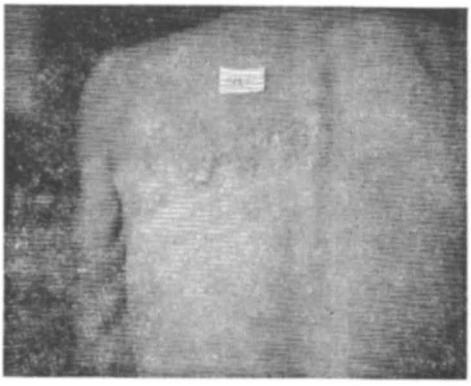

Fig. 2
4th day of treatment

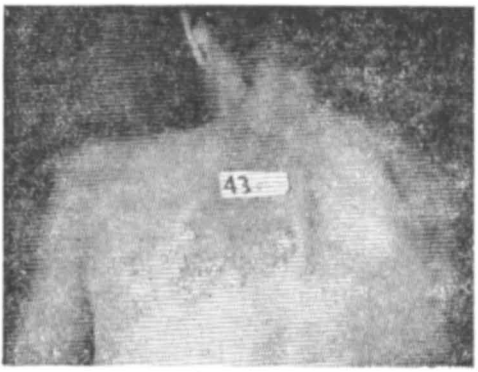

Fig. 3
6th day of treatment

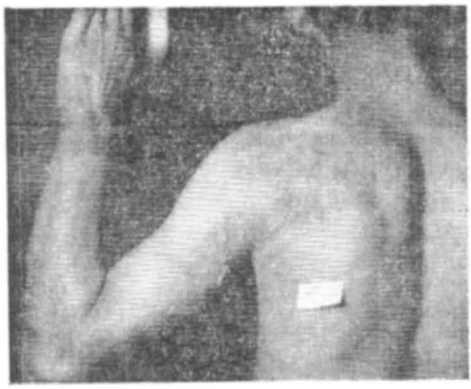

Fig. 4
2nd day of treatment

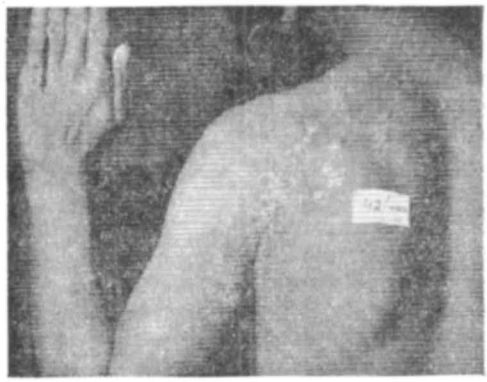

Fig. 5
6th day of treatment

Fig. 6
2nd day of treatment

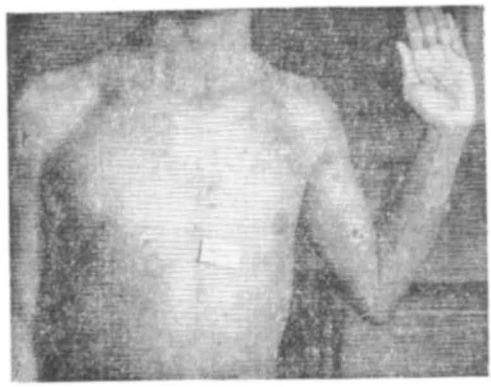

Fig. 7
6th day of treatment

We have observed the effect of griseofulvin on Herpes Zoster to be mainly anti-inflammatory. The strong clinical evidence of a dramatic improvement in signs and symptoms and immediate arrest of the disease process after administration of griseofulvin suggests its action as an anti-viral drug also. The possibility of either a direct or an indirect action as an antimetabolite which may be preventing the multiplicity of the virus in the infected cell cannot be ruled out.

Further investigation is necessary to determine its action on viruses especially of the chicken pox and the herpes simplex.

Secondly, the dosage of griseofulvin used in this project has been 6 tablets per day and it would be worth while to try higher dosage like 8 to 12 tablets per day depending on the severity of the mainfestations of herpes zoster.

The drug in the dosage prescribed were well tolerated and its side effects like nausea, giddiness, headache and heart burn observed occassionally were in no case of such a severity as to demand discontinuation of the treatment.

In the present series griseofulvin *has shown remarkable results in one of the acute viral diseases like herpes zoster. There is still a scope of determining the therapeutic efficacy of this drug in other systemic and cutaneous diseases.

*The drug used for this project was 'Grisevin 'F.P' manufactured by Glaxo Pharmaceuticals

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TRUE or FALSE?

Bound immunoglobulins and complement at the dermo-epidermal junction is specific for Lupus Erythematosus

(Answer at Page No. 77)