BETAMETHASONE IN HERPES ZOSTER

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Summary

60 cases of herpes zoster belonging to different age groups were taken up for the present study. 30 cases were treated with Betamethasone orally which constituted the trial group and the remaining 30 cases constituted the control group. The duration of pain was markedly shortened by the use of betamethasone without any incidence of generalization of skin lesions. No case in the trial group suffered from post herpetic neuralgia wl ereas 4 cases in control group had this complication. Betamethasone did not show any effect on the healing time of skin lesions of herpes zoster.

The effects of corticosteroid therapy on herpes zoster are still not well-established. Different authors have reported different results. Dramatic relief of pain in 24 to 36 hours in 5 patients with cortisone therapy orally was reported by Gelfand[1]. Appleman[2] in his 4 patients achieved equally dramatic relief of pain within 24 to 36 hours by using corticotropin intradermally or intravenously. Elliott[3] used high doses of Prednisolone in his 16 patients and achieved relief of pain in an average period of 3⅛ days whereas similar result was achieved only in 3½ weeks in his 10 controls. Eaglstein, Katz and Brow[4] used high doses of triamcinolone orally in 15 cases in their double-blind study of 34 cases and used Lactose tablets in the remaining 19 cases. They reported that neither the healing time of skin lesions nor the early pain was influenced by corticosteroids. The effects of steroids in their patients were noticed 2 weeks after starting therapy. The authors however felt that the corticosteroids were helpful in preventing the complication of post-herpetic neuralgia. Luby[5] reported shortening of the period of post herpetic neuralgia by short term use of triamcinolone. An opposite view was expressed by Merselis, Kayne and Hook[6] and Sparberg and Kirsner[7] who suggested that the use of steroids might lead to severity or generalization of the eruption of herpes zoster.

All these reports are based on studies in small number of patients and do not clearly define the effects of corticosteroid therapy in herpes zoster. Hence, the present study was undertaken to establish the role of corticosteroids in herpes zoster.

Material and Methods

60 patients with herpes zoster attending the skin outdoor clinic in Rajendra Hospital, Patiala were chosen for the present study. No case of tuberculosis, diabetes, cardiac disease, hypertension, malignancy or peptic ulceration was included in the study. 30 patients were put on betamethasone (Betnelan)* tablets constituting the trial group and 30 other patients were put on routine symptomatic treatment constituting the

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* Betnelan tablets (0.5 mg. Betamethasone)

control group. Their age-sex distribution is presented in Table 1 and sites of involvement in Table 2. Results of treatment are shown in Tables 3, 4 & 5.

TABLE 1

Age and sex distribution in patients of Trial and Contol groups.

Age in years	Trial		Control	
	M	F	M	F
0–10	—	3	1	—
11–20	4	1	6	2
21–30	4	1	5	2
31–40	3	1	2	3
41–50	—	2	—	1
51–60	6	1	4	1
61–70	2	1	1	1
71–80	1	—	1	—
Total	20	10	20	10

TABLE 2

Sites involved by Herpes Zoster in patients of Trial and Control groups

Site	Trial	Control
Cranial	5	2
Cervical	6	6
Thoracic	15	18
Lumbar	4	3
Sacral	—	1
Total	30	30

TABLE 3

Relationship between duration of illness in days before treatment and relief of pain in days in patients of Trial and Control groups.

Duration of illness in days.	Group	Relief of pain in days and number of cases				
		1–7	8–14	15–21	22–28	More than 28
Less than 5 days	Trial	9	17	—	—	—
	Control	–	—	12	2	1 (P.H.N.)
More than 5 days	Trial	–	4	—	—	—
	Control	–	1	7	4	3 (P.H.N.)

TABLE 4

Duration of pain in patients of Trial and Control groups.

Group	Duration of pain in days		
	Minimum	Maximum	Average
Trial	5	13	9
Control	14	176	27

TABLE 5

Results of treatment in healing of skin lesions and duration of disease in days in patients of Trial and Control groups.

Group	Healing of skin lesions in days			Total duration of disease in days		
	Minimum	Maximum	Average	Minimum	Maximum	Average
Trial	15	23	19.5	16	28	18.6
Control	13	21	17.1	19	183	32.6

Dosage schedule

The trial cases were put on Betamethasone 0.5 mg. tablets (Betnelan) in addition to topical shake lotions and B_{12} injections in the following dosage schedule.

3.0 mg./day x 2 days (2 tab. s.t.d.)
2.0 mg./day x 3 days (1 tab. q.i.d.)
1.5 mg./day x 5 days (1 tab. t.d.s.)
1.0 mg./day x 5 days (1 tab. b.d.)
0.5 mg./day x 5days (1 tab. o.d.)

The control cases received only symptomatic treatment in the form of analgesics, topical shake lotions and B_{12} injections.

Follow-up of the cases was done every 5th day. Skin lesions were considered healed when the crusts fell off completely. Pain persisting upto 30 days after healing of skin lesions was termed as 'prolonged neuralgia' and the pain persisting beyond 30 days was termed as 'Post herpetic neuralgia'.

Results

Results of the treatment in the trial and control groups are shown in Tables 3, 4 and 5. The following inferences can be drawn:—

1. There was marked shortening in the duration of pain in the trial group to 5-13 days with an average of 9 days after the start of betamethasone threapy which was earlier than the healing of the skin lesions (Table 4). In the control group on the other hand duration of pain was 15 days (earlier than healing of the skin lesions) in 2 cases and 14-21 days (same duration as healing time of skin lesions) in 12 cases. Prolonged neuralgia of 3 to 10 days was present in 12 cases and post herpetic neuralgia lasting for 3½ weeks to 6 months in 4 cases. The duration of pain varied from 14-176 days with an average of 27 days (Table 4).

2. Duration of illness before starting the therapy, had relation with relief of pain. In trial cases (with less than 5 days as duration of illness) pain was relieved in 1-7 days in 9 cases, 8-14 days in 17 cases. Control group showed relief of pain in 15-21 days in 12 cases, 22-28 days in 2 cases and in more than 28 days in 1 case (Table 3). In trial group, with more than 5 days of duration of illness (before the start of therapy), pain was relieved in 8-14 days in 4 cases. Control cases showed relief of pain in 8–14 days in 1 case, 5-21 days in 7 cases, 22-28 days in 4 cases and in more than 28 days in 3 cases (Table 3). Earlier the treatment was started with betamethasone, shorter was the duration of pain (Table 3).

3. The earliest effect of betamethasone on pain in herpes zoster was detectable by the 5th day of therapy and pain was relieved on an average by 9th day. (Table 4). Fig. 1.

4. Healing time of skin lesions, in trial group, varied from 15-23 days with an average of 19.5 days. Total duration of illness varied from 16-28 days with an average of 18.6 days. Control group showed healing of skin lesions in a period ranging from 13-21 days with an average period of 17.1 days. However, total duration of illness, in the control group varied from 19-183 days with an average period of 32.6 days. Betamethasone appeared to have prolonged the healing time of skin lesions in trial group. However, the total duration of illness was shortened by corticosteroids (Table 5).

5. No case had post herpetic neuralgia in trial group whereas 4 cases had this complication in the control group. The neuralgia lasted for periods varying from 3½ weeks to 6 months.

6. No generalization of lesions occurred with the use of betamethasone in any of the trial cases.

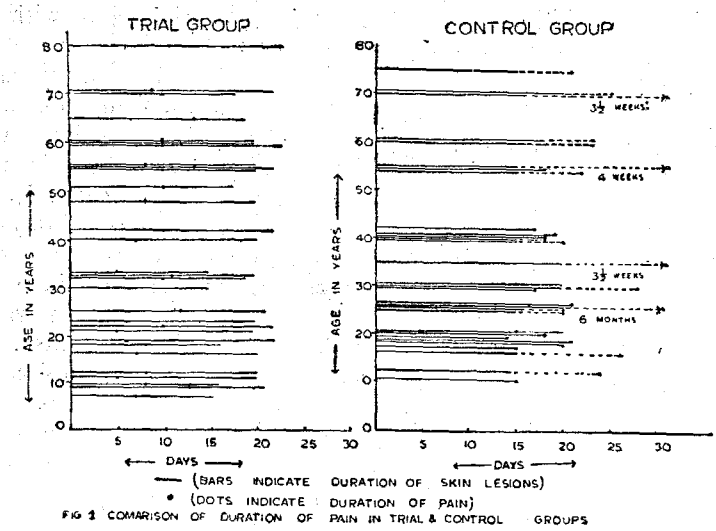

FIG 1 COMARISON OF DURATION OF PAIN IN TRIAL & CONTROL GROUPS

Discussion

In our study we have established that the use of corticosteroids in herpes zoster markedly shortens the duration of pain and prevents post herpetic neuralgia. In about 50% of cases in which corticosteroids were not used, pain persisted till the skin lesions healed and in about other 50% of cases, pain persisted even after the skin lesions healed. Among this latter group, some developed post herpetic neuralgia. In acute phase of herpes zoster the pain is due to the inflammation of dorsal root ganglia and the peripheral nerves which in turn results in post inflammatory fibrosis leading to post herpetic neuralgia. Corticosteroids are helpful in reducing the inflammatory process and thus post herpetic neuralgia by preventing post inflammatory fibrosis. Thus, earlier the treatment is started, better the results obtained. Similar results as regards pain of herpes zoster were reported by other workers[1,2,3]. However, our results were not as dramatic as those reported by them. In our cases, the earliest effect of corticosteroids was detectable only after 5th day of the start of treatment.

Our trial cases included 5 cases of herpes zoster of trigeminal nerve (Ophthalmic included) and none developed post herpetic neuralgia. This was in contrast to the results obtained in the control group where post herpetic neuralgia was a common complication. Similar observation was made by De Moragas and Kierland[8].

Our results are in contrast to those obtained by some authors[6,7] who believed that the use of steroids might lead to generalization of the lesions. No case in our trial group showed generalization of the skin lesions.

We agree with the results of Eaglstein, Katz and Brow[4] that corticosteroids do not affect the healing time of the skin lesions of herpes zoster to an appreciable extent.

Conclusion

We conclude that corticosteroids can be safely used to shorten the duration of pain in herpes zoster and to prevent post herpetic neuralgia without any danger of generalization of lesions unless there is some other contraindication to their use.

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REFERENCES

1. Gelfand ML : Treatment of herpes zoster with cortisone JAMA, 154 : 911, 1954.
2. Appleman DH: Treatment of herpes zoster with ACTH New Eng J Med, 253 : 693, 1955.
3. Elliott FA: Treatment of herpes zoster with high doses of prednisolone, Lancet, 2 : 610, 1964.
4. Eaglstein WH, Katz R and Brow JA : The effects of early corticoid therapy on the skin eruptions and pain of herpes zoster. JAMA, 211 : 1681.
5. Luby JP : Varicella-Zoster Virus, J Invest Derm, 61 : 212, 1973.
6. Merselis JG, Kayne D and Hook EW: Disseminated herpes zoster, Arch Intern Med, 113 : 679, 1964.
7. Sparberg M and Kirsner JB: Steroid therapy and infections, (editorial) JAMA 188 : 680, 1964.
8. de Moragas JM and Kierland RR : The outcome of patients with herpes zoster, Arch Derm, 75 : 193, 1957.

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