Lepr Rev (1988) **59,** 201–203

Comparison of colchicine and aspirin in the treatment of Type 2 lepra reaction

H K KAR* & R G ROY†
**Dermatologist, Department of Skin, STD and Leprosy, Dr RML Hospital, New Delhi-110 001, India; †Retired Director, Central Leprosy Teaching and Research Institute, Chingleput, Tamil Nadu, India*

Accepted for publication 6 December 1987

Summary In a double blind controlled trial, 34 episodes of acute Type 2 reaction in patients with lepromatous leprosy were treated with colchicine (1·5 mg/day × 4) and the response was compared with a similar number of episodes treated with aspirin (1·8 g/day × 4). Both drugs were found equally effective in mild degree reaction, whereas colchicine gave marginally better result in moderate degree reaction. Neither of the drugs was found useful in severe degree reaction. However, a better efficacy of colchicine was observed in the management of joint and nerve pain associated with Type 2 reaction. Minor side-effects like diarrhoea, nausea and vomiting were noted in only 1 patient while under colchicine therapy.

Introduction

Colchicine was tried by Sarojini & Mshana[1] in Ethiopia on 10 male adult patients for acute ENL attack. In all the patients, dramatic effects were obtained. On the other hand, Stanley *et al.*[2] found little or no effect on the steroid requirement of 5 adult male patients with severe Type 2 reaction. Sharma *et al.*[3] found it to be effective in mild to moderate cases of Type 2 reaction and a few cases of severe reaction with pustular lesions. At the Central Leprosy Teaching and Research Institute, Chingleput, India, a trial was undertaken to find out the efficacy of colchicine in comparison with that of acetyl salicylic acid (aspirin) in the management of acute Type 2 lepra-reaction.

Materials and methods

This was a double-blind study on 68, acute, Type 2 reactional episodes observed among 30 adult, active, lepromatous leprosy patients (6 females and 24 males). All cases were admitted to the hospital attached to the Central Leprosy Teaching and Research Institute, Chingleput throughout the trial period during 1984 and 1985. The severity of each reaction was graded as per the criteria given by Waters.[4] Very mild (Grade 1) and very severe (Grade 5) reactions were not included in this study. The diagnosis of each attack of Type 2 reaction was confirmed by biopsy of an active skin nodule (ENL).

0305-7518/88/059200+03 $01.00

All patients were bacteriologically positive varying from 2·66 to 4·33 (Ridley's logarithmic scale). Out of the 30 patients, 20 were under dapsone monotherapy and 10 under multidrug therapy (dapsone, rifampicin and prothionamide) for a period varying from 3 months to 3 years. None of them had taken clofazimine earlier.

A detailed clinical examination was conducted with special reference to density and distribution of ENL lesions, presence or absence of malaise, insomnia, anorexia, rise of temperature, pain/tenderness in peripheral nerves, joint and muscle pain, eye reaction, testicular tenderness and swelling, and lymph node, spleen and liver enlargement.

Laboratory examination included routine urine and blood examinations (haemogram, platelet count, blood urea estimation and liver function tests). Both clinical and laboratory examinations were carried out at the beginning and end of each treatment period.

Half of the reactional episodes (34) were treated with 1·5 mg of colchicine daily in 3 divided doses while the other half received 1·8 g of aspirin daily in 3 divided doses. Duration of treatment was 4 days in both the groups. To camouflage the identity of the drug, colour, shape and size of the capsules containing powder of each drug were kept uniform.

On the basis of allocation, either of the drugs was alternatively given to the patient for the reaction. If the patient did not respond to the drug by the end of the 4th day, the next code drug was given from the 5th day. On the other hand, if the patient responded well, the next code drug was given only when the next episode of reaction occurred in the same patient. If there was no improvement with either of the drugs during the first 8 days, the case was taken out of the trial and treated with steroids.

During the entire period of trial, no other drug was given apart from antileprosy drug(s) in unchanged dosage.

Assessment of the drug response was graded as mild, moderate or excellent, taking into consideration fall of temperature, disappearance of ENL lesions and improvement of other signs and symptoms of reaction.

Results

The clinical response in both treatment groups is presented in Table 1. For mild reaction, both the drugs were found equally effective, where as in severe type neither of them was able to control the reaction. In moderate grade reaction with colchicine therapy, 9 out of 14 episodes (64·3%) showed moderate to excellent response against 4 out of 14 (28·6%) in the aspirin group.

Table 1. Comparison of clinical response of colchicine with aspirin

Severity of reaction and number of episodes in each group	Mild reaction (Grade 2) 10				Moderate reaction (Grade 3) 14				Severe reaction (Grade 4) 10			
Degree of improvement	a	b	c	d	a	b	c	d	a	b	c	d
Colchicine group	0	0	1	9	1	4	7	2	8	2	0	0
Aspirin group	0	0	2	8	2	8	2	2	8	2	0	0

Note: a, no improvement; b, mild improvement; c, moderate improvement; d, excellent improvement.

Though details were not presented, nerve pain (neuritis) was reduced remarkably with colchicine therapy in 50% (12 out of 24) of reactions associated with neuritis against 18·2% (4 out of 22) in the control group. One patient under aspirin therapy developed right ulnar nerve abscess, followed by ulnar claw hand for the first time. He was immediately put on steroids.

For joint pain, there was a better response in the colchicine group, i.e. 81·8% (18 out of 22 reactions) against 34·8% (8 out of 23 reactions) in the aspirin group.

Side-effects were milder in both the groups. One patient while under colchicine therapy had nausea, vomiting and diarrhoea. The pre-treatment and post-treatment results of renal and liver function tests and platelet count did not reveal any abnormal variation.

Discussion

In short, our study did not reveal any special advantage with colchicine therapy in contrast to the findings observed by Sarojini & Mshana.[1] The marginally better improvement in moderate grade reaction could be due to a statistical factor, as the number of reactional episodes is rather limited in the present series. This mild to moderate clinical response is in line with the observations of Stanley *et al*[2] and Sharma *et al*[3] in their respective series. However, in our study colchicine has shown better ability to relieve joint and nerve pain.

The main limitations of this study are; (a) colchicine has not been tried for longer duration to see its effects on prevention of ENL reaction after the acute attack is under control; and (b) the number of reactional episodes treated with colchicine is rather limited. Nevertheless, trial indicates that colchicine has shown activity possibly equivalent to that of aspirin, chloroquin and antimonials in the management of mild to moderate degree Type 2 reaction in leprosy.

Acknowledgments

We are grateful to Dr C H Vinod Kumar, Dr S Balakrishnan, Dr V N Bhatia and the staff of CLTRI, Chingleput, Tamil Nadu, India for their cooperation in this study. Thanks are due to Mr Vijya A Mehta of Retort Laboratories, Madras, India for the generous supply of colchicine powder. The authors are indebted to Dr P N Neelan, the Director of CLTRI, Chingleput for permission to publish this paper.

References

[1] Sarojini PA, Mshana RN. Use of cochicine in the management of erythema nodosum leprosum (ENL). *Lepr Rev*, 1983; **54:** 151–2.

[2] Stanley JNA, Kiran KU, Pearson JMH. The use of colchicine in the management of Type 2 lepra reaction (erythema nodosum leprosum). *Lepr Rev*, 1984; **55:** 317–8.

[3] Sharma VK, Kumar B, Kaur I, Singh Mohan, Kaur S. Colchicine in the treatment of type II lepra reaction. *Indian J Lepr*, 1986; **58:** 43–7.

[4] Waters MFR. An internally-controlled double blind trial of thalidomide in severe erythema nodosum leprosum. *Lepr Rev*, 1971; **41:** 26–42.

TEACHING MATERIALS AND SERVICES

Video at Karigiri, South India, for leprosy teaching

In the Annual Report for 1987 of the Schieffelin Leprosy Research and Training Centre, Karigiri, Tamil Nadu, South India, we read with interest of the continuing development of 'Karigiri Video'. Under activities: 'The Government of India and The Leprosy Mission have initiated a project entitled, 'Control/Eradication of Leprosy through Community Health Education'. This programme is being financed by USAID. We have been asked to produce 32 programmes for medical and paramedical personnel, patients and the community, on various aspects of leprosy. These video cassettes will be distributed to 50 medical colleges and to all the 44 leprosy training centres in the country, for their teaching programmes.

All the cassettes produced under this project will be in support of the National Leprosy Eradication Programme.

The Video sub-committee of the Government of India—USAID Project, met at Karigiri on 28 and 29 May 1987, to review the programmes already produced and to suggest new subjects for medical undergraduates. The members included: Dr Gurmohan Singh, Head, Department of Dermatology, Benaras Hindu University; Dr (Mrs) Surrinder Kaur, Head, Department of Dermatology, P.G.I. Chandigarh; Dr D K Srinivasa, Head, Department of Preventive and Social Medicine, JIPMER, Pondicherry; Dr (Mrs) E S Thangaraj, Medical Co-ordinator, The Leprosy Mission, New Delhi; Dr M Christian and Mr Sanjay Agawal from Karigiri.

Further information from India, or other countries, on the development and use of video in leprosy teaching would be most helpful, and we hope that readers will submit material for publication. *Editor.*

Christoffel Blindenmission–LEPRA. Ophthalmic Course, Karigiri, India 1988

A 4-day ophthalmic teaching module was held at the Schieffelin Leprosy Research and Training Centre, Karigiri from 29 February to 3 March 1988. This course, which was sponsored jointly by the Christoffel Blindenmission and LEPRA, was designed to give instruction to leprologists on the detection, prevention and management of the ocular complications of leprosy by means of a series of lectures, clinical and surgical demonstrations, videos and slide-tapes.

Teaching included presentations on basic anatomy, physiology and pathology of the eye with special emphasis on leprosy: in addition there were lectures on the clinical signs and management of lagophthalmos, corneal ulcers, intra-ocular inflammation and infiltrative lesions together with a discussion on the global aspects of blindness in the disease.

The course, which was attended by 16 participants, was run by Dr Margaret Brand from Carville, USA and Mr Timothy ffytche from St Thomas's Hospital, London, together with contributions from Dr N Suryawanshi and Dr Mary Jacob of Karigiri. The Director and staff of Karigiri and The Leprosy Mission are to be congratulated on their continued support for this important and increasingly popular contribution to teaching.