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Short Communication

UP REGULATION OF IMMUNE STATUS OF A MDT COMPLETED BORDERLINE LEPROMATOUS LEPROSY PATIENT TREATED WITH HOMEOPATHIC PREPARATION OF *MERCURIOUS SOLUBILIS* – A CASE STUDY

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ABSTRACT : A borderline lepromatous leprosy patient was treated with anti-leprosy treatment. During the period of treatment Type 1 reaction developed. The patient was treated with multi drug for second time along with steroid. On completion of MDT the patient was released from treatment though the patient was found to suffer from skin lesion and plantar ulcer with osteomyelitis. The patients was treated with *Mercurious solubilis*, a homoeopathic medicine for a period of four years three months. At the end of the treatment the skin biopsy revealed the picture of indeterminate leprosy.

Key words: Borderline lepromatous leprosy, Plantar ulcer, Osteomyelitis, *Mercurious solubilis*, Indeterminate leprosy.

Reactional states in leprosy are varied signs and symptoms of inflammation arising from acute or chronic hypersensitivity brought about by the patient's immunologic response to antigens of *Mycobacterium leprae*. Type 1 and type 2 immune-mediated reactions occur in about 30% of patients with multibacillary disease during and after multidrug therapy. (Walker *et al.* 2011). The type 1 reactions (T1R) are due to increased cell-mediated immunity and result in localized tissue damage. Steroids are the main treatment, but a systematic review found only three trials of adequate quality that supported this strategy (Van Veen 2008). An evidence-based review revealed that the optimum duration of steroid treatment is

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unknown, although some data suggest that longer courses are better, as 20 weeks of treatment yielded better results than 12 weeks of treatment in one study (Rao 2006). No studies have used a dose-per-weight regimen. In this communication a case of borderline lepromatous leprosy with Type 1 reaction with a history of anti leprosy treatment with steroid was treated with *Mercurious solubilis* and the detailed follow up observations recorded has been presented.

Case History

First Phase

In 2001, the patient first reported to a leprologist, who was a Professor & Head, Department of Skin & STD NRS Medical College Calcutta, for the period of 14th months and treated medicines like Baycin 500 mg – 2 times daily for 2 weeks, Lancibay 50mg for 1 week, Hanscyprin 500mg for 3 weeks, Rifampicin 600mg – 1st day x 4 weeks, Dapson 100mg – 2 times daily.

After treatment for the period of 14 months, development of Type 1 reaction was noticed and due to worsening of the condition of the ulcer, the patient visited a Medical College and Hospital, Vellore in the State of Tamilnadu, India. The case was diagnosed as borderline lepromatous Hansen's disease with Type I reaction . The skin areas showed a B.I of 2.8. There was a left plantar ulcer (Grade II deformity) and a abscess was noted in left infra orbital area. The patient received indoor treatment for 7 days.

General and systemic examination of the patient were found normal. Cutaneous examination reveal clofazimine induced icthyosis over the trunk and extremities. There were no patches. Both the ulner nerves, both the common peroneal nerves and the left posterior tibial nerves were enlarged.

Motor assessment revealed a right ulnar mobile claw hand (ulnar supplied muscles were grade 2-5). There was loss of sensation over the ulnar nerve supplied area of the dorsum of the hand.

Stocking anesthesia was been over both lower limbs below the knee on the left and over the lower 1/3 of the right leg and feet. A 2x2 cm hyperkeratotic tropic ulcer was seen over the left sole. There was a 2x3cms abscess in the left infraorbital area. There was polydactyl on the right.

Haematologic investigation carried out first day of admission revealed no noticeable abnormal result.

For the type 1 reaction he was given on Prednisolone 50mg once a day. WHO recommended multi bacillary multi drug therapy was continued. At discharge advised to be the assessment showed improvement. He was seen by the reconstructive surgeons who ordered an above elbow slab, a knuckle bender splint and exercises. The plantar ulcer was treated with 6% salicylic acid and pared.

He was found to have WBCs along with pus cell casts in urine. There was no growth in urine culture. The AFB smear on the urine was negative. The patient was advised Prednisolsone along with MB – MDT to be continued for at least of 2 years at the time of discharge from the hospital. The patient was advised for review after 6 months in follow up with one hospital in Kolkata.

Second Phase

Treatment given in a hospital in Kolkata:

The patient was advised Dapsone in addition to the medicines prescribed earlier. Liquid

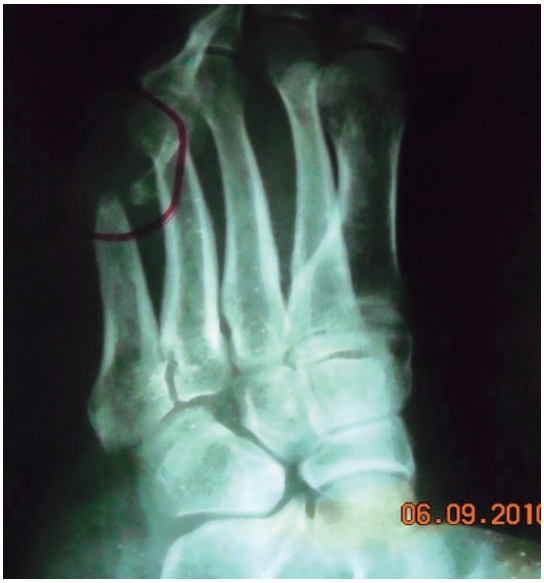

Fig. 1a . Resorption of bone at the distal end of Left 5th metatarsal bone with dislocation of metatarsal phalangeal joint of left 5th toe.

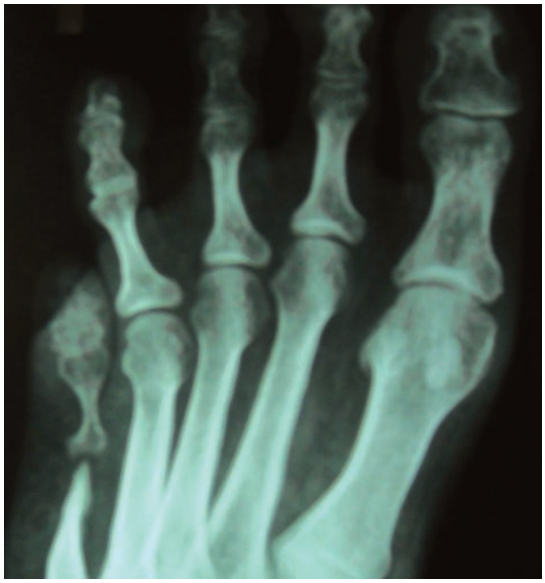

Fig. 1b. No evidence of dislocation seen, Re-absorption with tapering seen in the distal end of left 5th metatarsal bone.

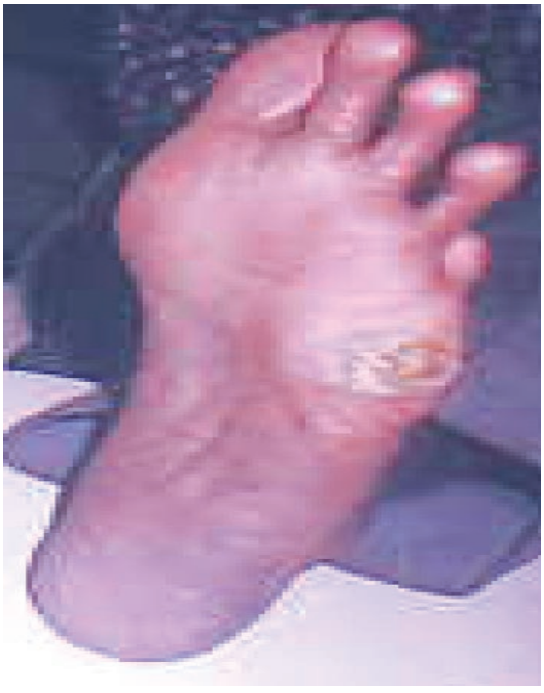

Fig. 2a. Chronic Ulcer (Under Treatment).

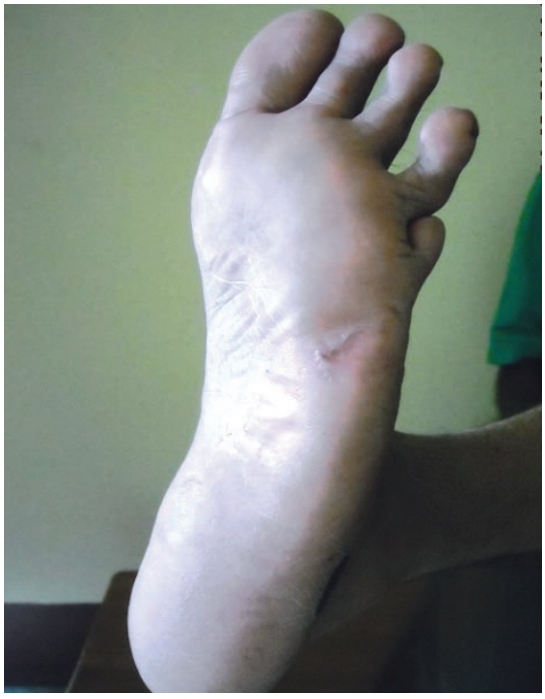

Fig. 2b. Ulcer Healed up (Post Treatment).

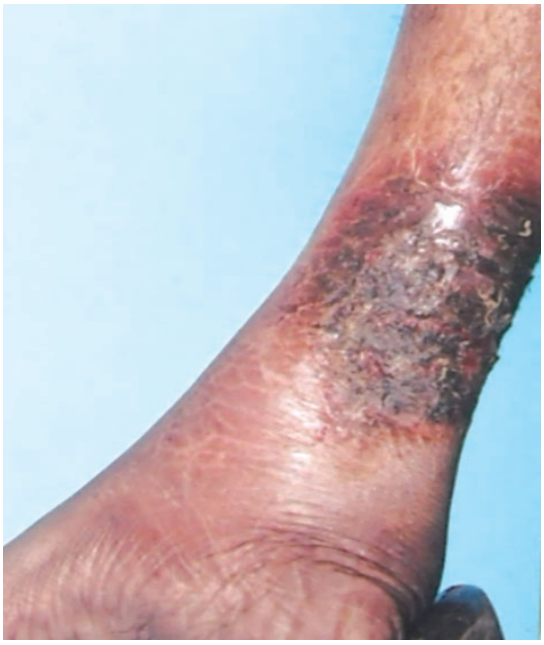

Fig. 3a. Clofazimine induced skin lesion were present on right leg.

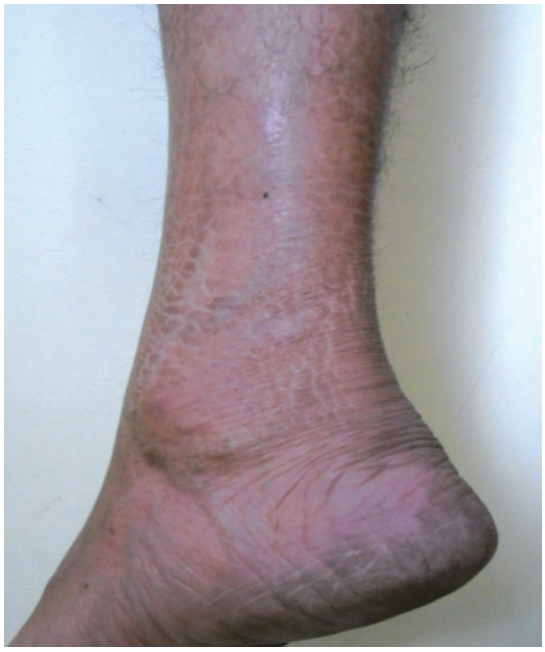

Fig. 3b. Clofazimine induced skin lesion disappeared.

paraffin for apply on Trophic ulcer 2 times daily. Afterwards he was given Wysolene 25mg once tab two weeks after break first, Then 20 mg 1 tab daily after break first. Clofazimine 300mg and Rifampicin 600mg was prescribed for first day only.

Medical College & Hospital in Tamilnadu (second visit):

A treatment was restarted with 40mg Wysoline per day in view of increasing weakness in left foot. The medicine was continued for more than three months. Slit skin smear was done which was still AFB positive. BI – 1.8 (RT ear 3+, RT cheek 2+, trunk 2+, leg 2+).

Tests performed by a specialist in Kolkata:

The x-ray of Lt Foot AP & OBQ view revels evidence of resorption of bone at the distal end of Left 5th metatarsal bone with dislocation of metatarsal phalangeal joint of left 5th toe. Soft tissue was swollen. Clinical co-relation suggested exclude infective pathology / leprosy (Fig-1a).

Homoeopathic treatment of the patient

The patient afterwards started Homeopathic treatment at Institute of Health Studies & Rehabilitation.

The case study revealed that the patient was suffering from loss of sensation of left foot

below knee with a complicated deep ulcer present on plantar region below 5th toe. Anesthesia was present on right hand and 1/3 of the right leg. Both ulnar, both lateral poplitial and left tibial nerve were thick and tender.

Measurement of ulcer- 4x4.6x2.8 cm. Discharge profuse with foul smell, swelling and pain (Fig. 2a). Clofazimine induced skin lesions were present on the right leg. (Fig. 3a).

Report of skin biopsy taken before treatment:

Skin shows focal collection of lymphocytes and macrophage cells with perivascular and perineural collection of lymphocytes. Nerve bundle appear oedematous.

The case was diagnosed as Borderline Leprosy.

Homeopathic treatment profile

1.Merc. sol 200 1 dose / *os* /weeks for one year only

2.Calc. Sulph 6X 4 tabs 4 times daily

3.Calendula 1x for local application one time daily for 6 months

4. For Clofazemine induced reaction on skin Mezereum 30/one dose/os/given to the patient for 20 days. After 20 days reaction completely cured.

5. Dressing was done with sterilize gauge alternate days. No topical drug was applied.

Report of skin biopsy taken during treatment showed thin epidermis with flattened ret ridges.There are scanty perivascular and perineural collection of lymphocytes and histiocytes.

Result of Homeopathic treatment

X-Ray of left foot taken after two years revealed that there was a evidence of improvement in dislocation of metatarsal phalangeal joint of fifth toe soft tissue swollen. The ulcer showed improvement, there was no discharge and pain.

Another X Ray of the same left foot was taken after next two years. That revealed evidence of radiological improvement as compared to previous report. No evidence of dislocation seen. Re absorption with tapering seen in the distal end of left 5th metatarsal bone (Fig. 1b). Clofazimine induced skin lesions disappeared on right leg (Fig. 3b) with regain of sensation.

The ulcer completely healed up (Fig. 2b). Final diagnosis was early indeterminate leprosy.

The successful treatment of patients with leprosy involves appropriate antimicrobial therapy, treatment of reactional states, prevention and treatment of disabilities, and culturally sensitive psychosocial interventions. All are critical to attaining a productive outcome and maintaining the patients' continued integration in society. Some studies revealed that the reactional states following the completion of WHO MDT, particularly 1 year WHO MDT, found to be substantially frequent, severe, and of long duration (Ma. Victoria 2010). The relapse rate after steroid therapy has been reported to be 20–50%. (Van Brakel *et al.* 2010). In a pilot study, disability of MDT leprosy affected persons were successfully performed by Homeopathic medicines (Chakraborty *et al.* 2015). In this case also the selection of medicine was done according to William Boerick (1976) and Kent (1978) repertory.

Second-line drugs for the treatment of patients who do not respond to prednisolone are also needed (Van Brakel *et al.* 2010) and Merc. sol could be the choice to manage reaction.

Therefore, at this crucial juncture of leprosy elimination this alternative therapeutic approach may be a justifiable proposition and would be of great help to treat the leprosy patients with reversal reaction.

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