CASE REPORT

Indeterminate leprosy in an infant

K. V. KRISHNA MOORTHY & K. V. DESIKAN
Blue Peter Research Centre, LEPRO Society, Hyderabad, India

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Summary  An infant, 8 months old having histologically confirmed indeterminate leprosy is reported. The source of infection and possible mode of transmission are discussed.

Case report

Occurrence of leprosy in an infant is very rare, because the incubation period has been stated to be as long as 2–5 years.1 We have recently found leprosy in an 8-month-old infant. The infant was brought to the clinic, the mother having observed faint few patches on the chest and buttock. The mother did not have leprosy; however, the father has BL type leprosy. He was treated for 1 year with MB MDT at this institute, his initial skin smear report being BI of 1.6.

On examination, pale flat macules, two on the chest (Figure 1) and one on the right buttock were found. The macules measures as follows: (i) right side chest, 4/3 cm; (ii) left side chest, 3.5/3 cm; (iii) right buttock, 4/3 cm. The patches were not well defined and sensation could not be elicited. Skin smear from the edge of the patch on buttock was bacteriologically negative.

A biopsy of the buttock lesion showed evidence of indeterminate leprosy (Figure 2). The patient was put on PB MDT with 100 mg rifampicin syrup once a month. Dapsone powder 10 mg was given with milk daily. The baby’s tolerance to MDT has been good.

Discussion

There have been reports of cases in infants. Jain et al.2 have mentioned a 9-month-old infant with BT leprosy from Dhoolpet Leprosy Research Centre, Hyderabad, India while describing leprosy in childhood. Fakhouri et al.3 have also discussed childhood leprosy. This type of
leprosy in infants has been described as nodular leprosy of infancy in Brazil, and is not seen in infants in India.

Duncan et al.\textsuperscript{4} have reported leprosy in two infants aged 9 months. Giridhar et al.\textsuperscript{5} reported leprosy in infants of age 4 months and 2 months from North India. Giridhar et al.\textsuperscript{6} have also reported leprosy in an infant, contracted at 10 months, but confirmed when the baby girl attained 1 year and 7 months.

Brubaker et al.\textsuperscript{7} have reported 91 cases of leprosy in infants on the basis of information obtained from a review of the literature from the US armed forces institute of pathology files and from a correspondence survey. Biopsy confirmation was available on only 19 infants. Mother was the source of infection in 29 infants. Father and others were the source of infection for others.

Abraham et al.\textsuperscript{8} have observed that the large majority of the single leprosy lesions were in posterior aspect of the upper extremity and anterior aspect of the lower extremities, which are injury and abrasion prone areas facilitating entry of bacilli.

Figure 1. Patch over the right and left sides of the chest hypopigmented patches.

Figure 2. Photomicrograph showing a small nerve infiltrated by lymphocytes (H&E \times 400).
Giridhar, in his article on skin-to-skin transmission of leprosy, considers that the skin is at least one of the important routes of transmission of the disease, and that infection can occur through skin-to-skin contact with leprosy patients, particularly those at the lepromatous end. Several authors, including Horton et al. support this view.

With regard to the respiratory route of entry of *Mycobacterium leprae*, the evidence in its favour is on the increase, despite the long held belief that the skin was the exclusive portal of entry. Most of this experimental work was with aerosol containing *M. leprae* in immune-suppressed mice, suggesting a similar possibility in humans. Such a possibility under natural conditions among human beings has been questioned by Leiker.

Accidental inoculation through skin is another possibility of transmission. Porrit and Olsen have made an interesting report, according to which two US marines developed tuberculoid leprosy 3 years after getting tattooed during their stay in Australia. In the currently reported case, there is no such history.

Since it is very rare to find leprosy in infants, this case is being reported. Duncan has advanced the possibility of haematogenous spread from the mother via placenta. The general impression of leprologists regarding transmission is intimate skin-to-skin contact with the parent. In this case, the possibility of direct contact with the skin was with the father, as he used to carry the child in the manner shown in the photograph (Figure 3). Such a possibility has been illustrated by Badger.

**Conclusion**

Leprosy in infants, although rare, can be seen among contacts of bacteriologically positive parents or patients who are living closely. If any infant is brought with signs of leprosy by the parent who is affected with leprosy, further investigation must be carried out to confirm leprosy and institute treatment.

**Figure 3.** The usual way in which the father carried the child, over the right forearm. Father is smear positive BL case.
References


