MULTIPLE LEPROTIC NERVE ABSCESSES IN A CHILD

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Khanolkar[1] emphasizes that leprosy is a disease of nerves as *Myco-bacterium leprae* has a special predilection for nerve tissue. An almost consistent feature of tuberculoid leprosy is early involvement of peripheral nerves manifested clinically as thickening and tenderness of nerves with impairment of sensory functions in the region of their distribution.[2] However, in certain individuals, coagulation necrosis occurs in the thickened nerves in the central portion resulting in nerve-abscess,[2] indicating a high degree of immunity.[3] This is most likely to occur at points where bacilli concentrate due to obstruction of their passage up the nerves.[4] An abscess may remain in the centre of the nerve, forming a fusiform swelling, or form a sack-like projection attached to its side. The severity of neural signs is in direct proportion to the pressure exerted by the pus on the nerve fibres. At times the abscesses burst spontaneously discharging their contents tending, however, to remain encapsulated for a considerble time. Evacuation is followed by greater or lesser relief of symptoms. Nerve abscesses may be subacute but are more often chronic. They may be single or multiple. These abscesses are more frequently met with in ulnar, the medial cutaneous nerve of forearm, the auricular and the sural nerves.[4,5] Examination of the nerve abscess may fail to show acidfast bacilli.

Nerve abscesses are relatively rare and have been only infrequently reported.[6,7,8,9] A case of multiple nerve abscesses is reported here showing spontaneous bursting, discharge of necrotic material and subsequent healing. Occurrence of these lesions in a child is particularly noteworthy.

CASE REPORT

J. M., a child aged 9 years, reported to the section of Dermato-venereology of S. S. Hospital, B. H. U., Varanasi-5, on 20th August, 1965 with a well defined hypopigmented patch situated on the ulnar side of the dorsum of left hand having impaired sensations. This was first noticed by the parents of the child when he was about 7½ years old, but received no attention, apparently as the child belonged to a poor strata. About 4 months later, a painful swelling appeared at the wrist on the ulnar side, which ultimately burst on to the surface discharging yellow material by a sinus. This healed spontaneously leaving behind a depressed scar. Since then the child had similar two more episodes healing up in an identical manner.

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In the present illness, for three months, before reporting to the hospital, the child experienced a very painful swelling on the medial side of the elbow with redness and augmented impaired sensation, which ultimately burst on the skin discharging yellowish material. The child received no treatment during this period. CLINICAL EXAMINATION: Showed a hypopigmented, atrophic scaly, well defined patch on the medial side of the dorsum of left hand, with raised margins, having impaired thermal and touch sensations. Smears from this lesion for acid fast bacilli were negative. NERVES: The left ulnar nerve was very much thickened and greatly tender, displaced from the ulnar groove and had taken a position in front of the elbow. A little above the elbow joint there was a swelling of an almond size, which was very tender and showing fluctuation. This was opening up on the skin by a sinus discharging a purulent material. (Fig. 1). There was an associated erythema

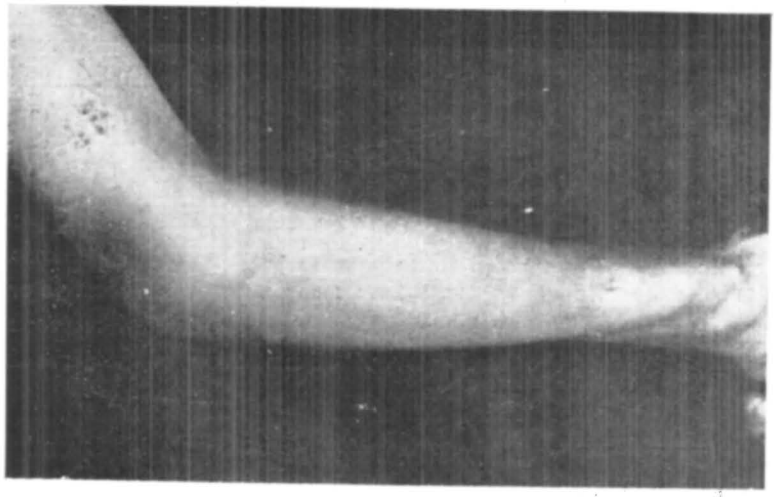

Fig. 1

over the swelling. SCAR MARKS: Three scar marks were seen in the left forearm in the distribution of ulnar nerve representing the healed sinuses. There was no apparent wasting of muscles of the hand. HISTOPATHOLOGY: Tissue sections stained with haematoxylin and eosin showed variable atrophy of stratum malpighii and hyper keratosis. In the subepithelial zone and in the upper dermis around skin adnexa granulamatous foci are present showing proliferated histiocytes, some of them having foamy cytoplasm and formation of giant cells. There is no caseation. (Fig. 2). No acid-fast bacilli could be demonstrated on special staining. Histological diagnosis: Tuberculoid leprosy.

TREATMENT AND PROGRESS: Exposure of nerve was done by a vertical incision of about $1\frac{1}{2}$ inches made along the ulnar nerve in the elbow region under local anaesthesia. On complete exposure, a swelling of an almond size was seen along the thickened nerve. (Fig. 3). An incision was given in the nerve sheath, pus drained out and the wound sutured. After exposure of nerve and drainage the patient felt much better and the constitutional symptoms lessened. Smears from the purulent discharge showed no acid fast bacilli despite careful search but only revealed

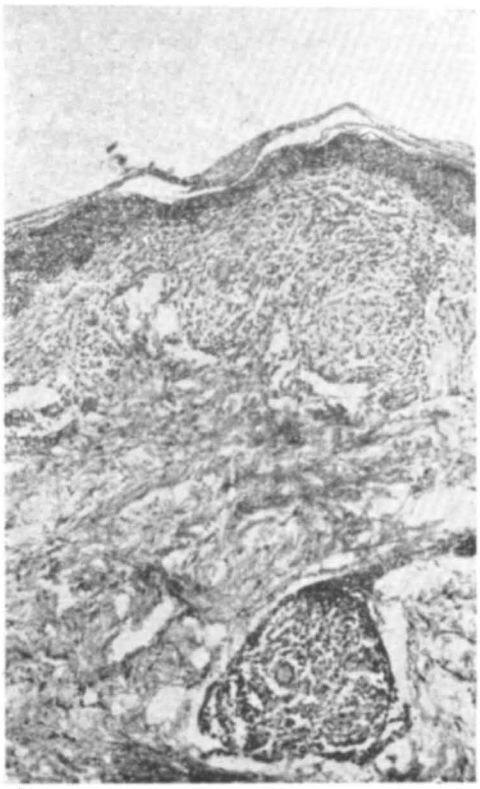

Fig. 2

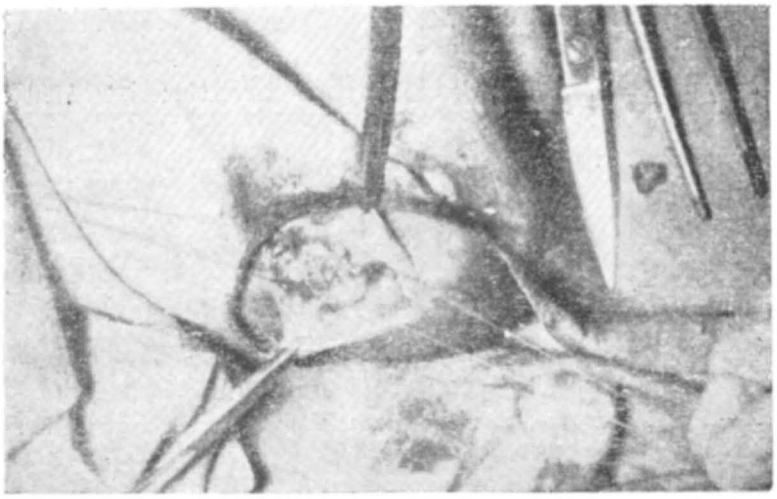

Fig. 3

degenerating polymorphonuclear leucocytes in various stages under Leishman's stain. Specific treatment with diaminodiphenylsulphone (Dapsone) has been subsequently instituted and the patient is under a follow up.

COMMENTS

A case of multiple nerve abscesses with spontaneous bursting of lesion and scarring is reported in which clinical features and biopsy studies showed evidence of tuberculoid leprosy. No acid fast bacilli could be demonstrated in the sections. Surgical drainage of the abscess relieved the patient, in conformity with the observations of Brand.[10] An unusual feature of the case is the occurrence of lesion at a very young age.

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LEGENDS

Fig. 1 — Showing a swelling in the elbow region, with discharging sinus. A scar is also made out in the region of the wrist.

Fig. 2 — Section showing atrophy of the stratum malpighii, some hyperkeratosis and tuberculoid granulomata of leprosy (X 100).

Fig. 3 — Showing exposed thickened nerve along with neighbouring fat.