Lepr Rev (1984) **55,** 173–176

Ulnar nerve calcification and abscess formation in two cases of primary mononeuritic leprosy

SUSIE SAMUEL,* N M SAMUEL,*
R H THANGARAJ† & K B SHRESHTA‡
* *Anandaban Leprosy Hospital, PO Box 151 Kathmandu, Nepal;*
† *The Leprosy Mission, 4th Floor, Sheetla House, 73–74 Nehru Place, New Delhi 110019, India;* ‡ *Military Hospital, Kathmandu, Nepal*

Accepted for publication 31 October 1983

Summary Since 1980, four patients have presented at the Shantha Bhawan and Patan Hospitals in Nepal with nerve abscesses. This paper describes the clinical, radiological and surgical operation findings in two of these patients who had ulnar nerve calcification.

Introduction

Although probably not uncommon in practice, few cases of peripheral nerve abscess in leprosy patients have been reported. Although occurring mainly in tuberculoid forms of leprosy, abscesses have been reported[1, 2] in lepromatous patients; Malaviya *et al.* recently reported six cases and recorded 11 others.[3] In the past 3 years, four patients have been seen with nerve abscesses at the skin clinics at Shantha Bhawan Hospital and Patan Hospital in Nepal. In this communication we report two cases of primary mononeuritic leprosy presenting with nerve calcification and subsequent nerve abscess formation.

Case report 1: A.L.H. No. 7070

A 30-year-old Nepalese male employed in Kathmandu presented at the skin clinic, Shantha Bhawan Hospital on 24.1.80 with acroparaesthesia of the left hand. The left ulnar nerve on palpation was found to be uniformly enlarged with no localized tenderness. There was no sensory deficit. Voluntary muscle test of the left hand showed an early low ulnar palsy with weakness Grade III of the adductor digiti minimi, dorsal interossei and the lumbricals II and IV. No skin

0305-7518/84/055173+04 $01.00

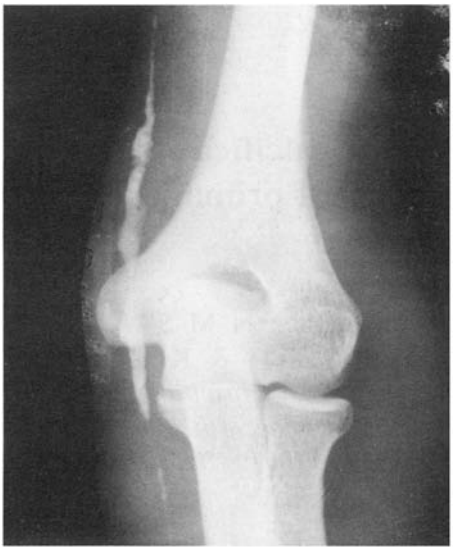

Figure 1

lesions were found. Skin smears for AFB from four sites were negative. A clinical diagnosis of primary mononeuritic leprosy was made. X-ray of the left arm showed a linear radio-opacity suggestive of calcification in the left ulnar nerve (Figure 1). Dapsone 50 mg daily was prescribed. At the follow-up clinic a month later the patient presented with a painful swelling of the left elbow joint. Examination showed a tender localized fusiform swelling of the ulnar nerve proximal to the medial epicondyle. An X-ray of the left arm was suggestive of an ulnar abscess (Figure 2). Surgical decompression and internal neurolysis of the left ulnar nerve was carried out under steroid cover.

The nerve abscess was gently curetted. The caseous content of the abscess was negative for AFB smears. Steroid cover was continued post-operatively. Subsequent sensory and voluntary muscle tests showed no significant change from the preoperative recording.

Case report 2: A.L.H. No 6896

A 25-year-old male Nepalese from Bara district presented at the Shantha Bhawan Skin clinic on 18.10.79 with a right ulnar palsy. He had been diagnosed as a case of tuberculoid leprosy at Duncan Hospital, Raxaul, India and was treated with dapsone 100 mg daily for a month. On examination no skin lesions were found. The right ulnar nerve was thickened but not tender. There was a fusiform, fluctuant swelling over the right ulnar nerve proximal to the medial epicondyle. The right hand showed a high ulnar palsy. Sensory and voluntary muscle tests

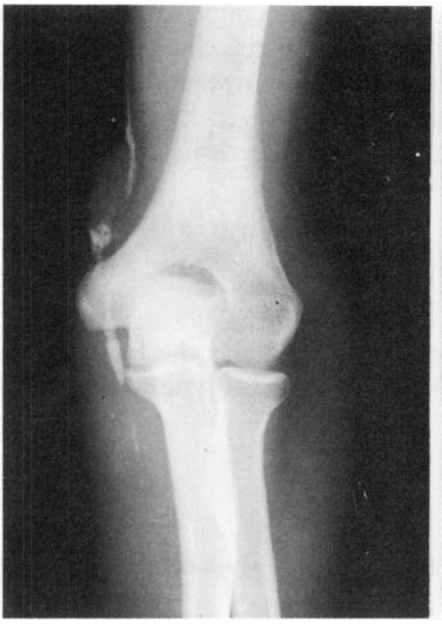

Figure 2

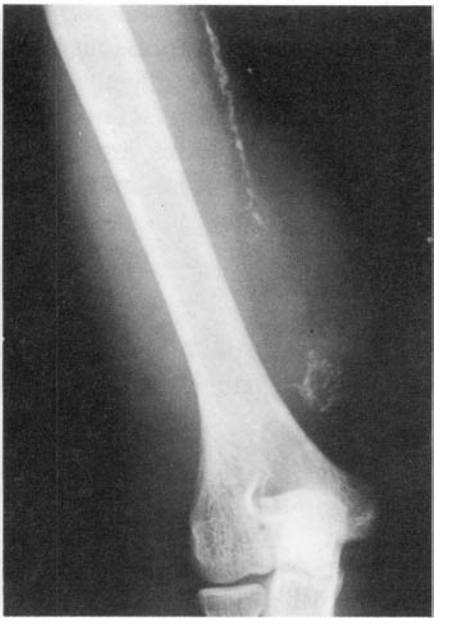

Figure 3

showed a sensory deficit along the distribution of the ulnar nerve and complete paralysis of the flexor carpi ulnaris, flexor digitorum profundus, III and IV, adductor digiti minimi dorsal interossei I, lumbricals III and IV. X-ray of the right elbow showed a linear radio-opaque shadow suggestive of calcification along the right ulnar nerve (Figure 3).

Skin smears for AFB were negative at four sites. A clinical diagnosis of primary mononeuritic leprosy was made and he continued to take dapsone 100 mg daily. He refused hospitalization at that point.

Internal neurolysis was done on 19.3.80 under local anaesthesia. The ulnar abscess was gently curetted. The caseous content of the cavity was negative for AFB smears. In this case there was no steroid cover either pre- or post-operatively. On 1.10.80 a lumbrical replacement of the right hand was successfully carried out using the extensor carpi radialis longus as the motor element and a free graft from the fascia lata.

Discussion

In leprosy, the causative organism, *Mycobacterium leprae* is believed to enter the site of predilection, the peripheral nerves, long before skin lesions appear. Although there is continuing debate about its significance and possible relation to previous skin lesions (no longer visible at the time of first presentation), primary

neuritic leprosy is well recognized in India[4] and other countries. We were unable to obtain any history of previous drug treatment in the cases described in this paper. Classification was difficult; although the lepromin reaction was negative in both patients, there was in fact no other evidence to suggest lepromatous leprosy. Peripheral nerve abscesses are known to those experienced in leprosy, but calcification, as in this case, appears to be rare.

Acknowledgments

We thank the staff of Anandaban Leprosy Hospital and the Leprosy Mission International for financial support and Mr M O Jacob for typing the manuscript.

References

[1] Sato S. Nerve abscess in lepromatous leprosy. Report of a case with a review of reports of nerve abscess in Japan. *Int J Lepr*, 1956; **24:** 408.

[2] Muir E. Nerve abscesses in lepromatous cases. *Int J Lepr*, 1939; **7:** 274.

[3] Malaviya GN, Mukherjee A, Ramu G. Nerve abscess in lepromatous leprosy. *Lepr India*, 1982; **54:** 123.

[4] Dharmendra, Chatterji SN. A proposed system of classification of India. *Lepr India*, 1953; **25:** 242–56.