LEPROSY IN THE CAPE

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It comes as a surprise to find 'rheumatoid arthritis' listed in the differential diagnosis of leprosy in Harrison's *Principles of Internal Medicine*.[1] This case is presented as an example of leprosy in which pains related to joints were the main complaints.

In 1845, Dr. H. A. Ebden, Editor of the *Cape Town Medical Gazette*, stated that 'leprosy was very prevalent in the Cape Colony'.[2] He worked at the Old Somerset Hospital, where lepers constituted one of the classes of patients. In 1894, a commission investigating the disease, examined 568 lepers at the hospital. The 'Leprosy Repression Act', regulating the detention of lepers, was promulgated in 1892. At present lepers are treated at special leprosariums in the Transvaal and Cape.

CASE HISTORY

The 49-year-old Xosa woman was born in the Transkei, where she has lived, apart from visits to Cape Town, between 1939 and 1943, and in 1964. She was married in 1943, divorced in 1958, and has no children.

Symptoms

Bodily pains. In August 1963 she complained of 'pain, swelling and stiffness of the right knee', which subsided. In December 1963 she had 'pain, swelling and stiffness of the left shoulder', which also subsided. In August 1964 she felt feverish, coughed up white sputum, had chest pains in varying sites, and was slightly dyspnoeic. Thereafter she felt well for 2 - 3 weeks, and then complained of pain in the right knee and left shoulder. In October 1964 pain and swelling developed in front of the left wrist, and the pain radiated into the fingers. The wrist felt stiff. The symptoms were worse at night, when the wrist would feel 'warm and more painful'. She realized that sensation was becoming impaired in the left hand.

Skin lesions. These appeared in October 1964. They were painless. When touched, they sometimes produced a 'shocking' sensation.

Findings

Examination. She looked well and there was no pyrexia. The abnormal physical signs were:

1. Soft-tissue swelling on the palmar aspect of the left wrist. It resembled 'fasciitis', or 'tenosynovitis', or the soft-tissue swelling of arthritis of the wrist joint. Full movements of the wrist caused some pain. Tapping the thickened area produced pain in the fingers. She was unable to flex the fingers fully, and could not fully oppose the thumb and little finger. The thenar muscles were slightly wasted. There was analgesia of the left palm and fingers in the cutaneous distribution of the median nerve.

2. The skin lesions chiefly affected the face and neck, with similar lesions on the right forearm, left deltoid, and right buttock. They were asymmetrical. They were slightly erythematous, slightly raised macules, with well-defined edges, non-tender, and anaesthetic.

3. The cervical nerves were visibly and palpably thickened on both sides, especially noticeable where they crossed the sternomastoid muscles (Fig. 1). The ulnar and occipital nerves did not feel thickened.

Investigations. X-ray examination of the chest was normal.

Biopsy of skin lesion: 'Numerous non-caseating follicles of Langhans, giant cells and epithelioid cells beneath the epidermis, around the adnexa and small vessels and around a nerve bundle. This is associated with a notable lymphocytic infiltration. No acid-fast bacilli were demonstrated.'

Examination of 2 nasal scrapings were negative. Bacteriological examination of tissue from skin lesions was negative

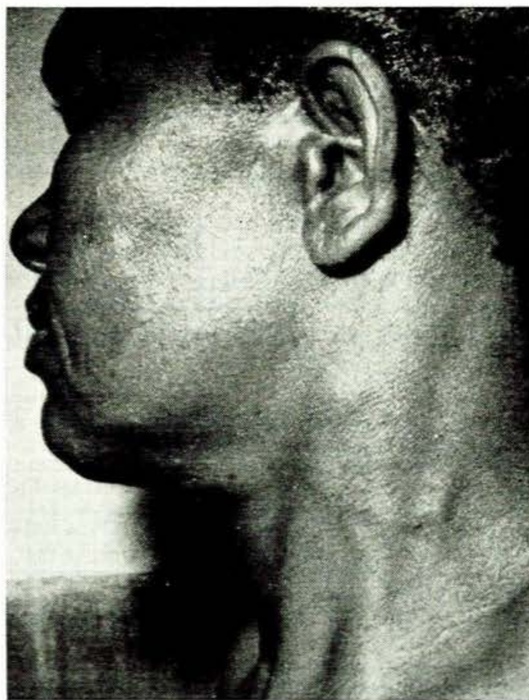

Fig. 1 Slightly raised anaesthetic macule on cheek, near angle of mouth. Thickening of cervical nerves crossing sternomastoid horizontally.

on 3 occasions. Biopsy cervical nerve: 'Extensive tuberculoid inflammation almost destroying the entire nerve. Occasional acid-fast bacilli have been demonstrated in the less involved portions of the nerve. The features are in keeping with the diagnosis of leprosy.'

The patient, who was on strict infectious precautions, was transferred to a leprosarium in the Cape.

DISCUSSION

The clinical and bacteriological features of the case correspond with those of tuberculoid leprosy,[1,3] viz. erythematous macules, accompanied by thickened nerves. Unlike lepromatous leprosy, the organism is far less easily detected in skin lesions and nerve biopsy is often required to establish the diagnosis.

Leprosy is an intermittently-progressive chronic disease in which temporary or even permanent arrest can occur. Nerve leprosy does not only produce a chronic painless neuritis, or polyneuritis, with painless trophic ulcers of extremities of digits. The leprous neuritis of tuberculoid leprosy may be more acute and cause rapid swelling of one or more nerves, sometimes with intense pain. This case had definite signs of left median neuritis, and the painful thickening on the palmar surface of the wrist was presumably due to leprous median nerve neuritis. This is a clinical reminder that the 'carpal-tunnel syndrome' can be due to leprosy. It is quite probable that the various pains she had experienced for 1 year in the vicinity of joints were similarly due to episodes of leprous neuritis.

Exacerbations and partial remissions may occur in leprosy. An exacerbation may be precipitated by an intercurrent self-limiting disease, e.g. dysentery or malaria. Perhaps the upper respiratory infection in August 1964 precipitated an exacerbation of neuritis and the development of skin lesions.

The determinants of susceptibility to leprosy are not fully known. Hawaiians have 70 times the morbidity experienced by Caucasians in Hawaii.[3] Sulphones remain the present drug of choice and the prognosis is better in tuberculoid than in lepromatous leprosy.

SUMMARY

Leprosy was once a major disease at the Cape. A case of tuberculoid leprosy is presented whose main symptoms were bodily pains, presumably due to leprous neuritis.

The main signs were anaesthetic skin lesions, median nerve neuritis, and thickened cervical nerves. Diagnosis could not be established by bacteriological examination of nasal scrapings or of skin lesions, but was established by nerve biopsy.

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