Unusual presentation of neurological tuberculosis

A case report

J. I. G. STRANG

Summary

A patient is described whose disease caused difficulty in diagnosis and indicated that neurological tuberculosis, like other extrapulmonary forms of this disease, may be associated with little or no evidence of pulmonary involvement. In a population where tuberculosis is common, antituberculosis drugs should be considered for any patient with undiagnosed illness — especially of the central nervous system — pending investigation. A search of the English-language literature did not reveal a similar report.

Intramedullary tuberculoma is rare, but in an environment where tuberculosis is common, unusual manifestations of it should be expected.

Case report

A 40-year-old woman was admitted to Umtata Hospital with a 6-month history of progressive weakness of the legs, associated with intermittent incontinence of urine of 3 weeks' duration. There was no history of trauma or of tuberculosis. The relevant findings on neurological examination were: inequality of pupils, right smaller than left, but both reacting to light normally; marked symmetrical wasting of the small muscles of the hands with associated weakness; spastic paraparesis and flexor plantar responses. The chest and heart were normal on clinical examination. A provisional diagnosis of syphilitic hypertrophic cervical pachymeningitis was made and lumbar puncture showed clear and colourless cerebrospinal fluid (CSF) with a protein level of 0.85 g/l, a trace of globulin, normal glucose level and no cells. CSF and blood Wassermann reactions were negative, but blood was sent for a fluorescent treponemal antibody test and, after an injection of long-acting penicillin, she was asked to return for review in 2 weeks. No urinary difficulties were noted during the stay in hospital. The chest radiograph showed a small, very faint opacity at the apex (Fig. 1).

Unfortunately, the patient only returned 2 months later with a history of inability to walk and retention of urine of 2 days' duration. On examination, fasciculation was present in the wasted small muscles of the hands and there was a partial Brown-Séquard syndrome, with a sensory level in the mid-dorsal region. Radiographs of the cervical and dorsal spine showed no abnormality. Four days after admission the patient complained of headache and developed neck stiffness; CSF examination showed a protein level of 1.6 g/l; globulin 3+; 12 lymphocytes and glucose 2.1 mmol/l. Antituberculosis drugs and prednisone were started and she was referred for urgent myelography. Before myelography, neurological examination showed absence of the triceps reflex in both arms, the biceps and supinator reflexes being retained, with a sensory level at D2 and loss of all modalities of sensation below it, but with normal anal tone. Myelography showed a block at the level of C5 caused by an intramedullary mass (Fig. 2).

A laminectomy was performed and an intramedullary tuberculoma was removed. Histological examination showed caseation and the presence of acid-fast bacilli.

There was no improvement in the patient's spastic paraparesis after surgical decompression of the spinal cord. On a particularly hot day it was noted that she showed no sweating on the right side of the face, where the pupil had been small pre-operatively. It became clear that the pupillary abnormality was part of a Horner's syndrome. Her condition deteriorated over several months with the development of infected pressure sores on her buttocks and she died of septicemia.

Discussion

Intramedullary tuberculoma of the spinal cord is very rare. During a 10-year period in a practice where neurological
Fig. 2. Myelogram showing an intramedullary block in the cervical cord.

tuberculosis, e.g. tuberculous meningitis and intracranial tuberculoma were not uncommon, this patient was unique. A search of the English-language literature has failed to reveal a similar case. Spinal cord compression was not suspected when the patient was first seen because of the absence of sphincter disturbance during a period of observation, and absence of a sensory level. Horner's syndrome can be very subtle and the inequality of pupil size was not attributed to it. The initial CSF protein level of 0.85 g/l made motor neuron disease unlikely. Tuberculosis was not considered because there was little evidence of it elsewhere and because it did not seem likely that this disease would cause such a picture. The absence of respiratory symptoms and the barely visible shadow at the apex of the right lung supported this belief. Experience in Transkei has shown that tuberculosis of the central nervous system, usually intracranial tuberculoma, may occur without evidence of the disease elsewhere. Several reports of intramedullary tuberculoma refer to the fact that radiographs of the spine and of the chest may show no evidence of tuberculosis.

The serious consequences of neglected tuberculous lesions of the central nervous system are such that it should be remembered in the differential diagnosis of unusual neurological illnesses in a population at risk; a trial of tuberculostatic drugs can do no harm, pending investigation. This has become my practice. Under ideal circumstances, a lumbar puncture should not have been done before myelography, but the latter was not available in Umtata and with headache and neck stiffness it was felt important to examine the CSF. Neurosurgical confirmation of the diagnosis seems justified, although two reports mention successful medical treatment of intradural spinal tuberculoma without surgical intervention. In one case the patient had a tuberculoma of the conus medullaris associated with acid-fast bacilli in the sputum, and in the other there was a complete spinal block in the dorsal region associated with CSF findings compatible with tuberculous meningitis; tubercle bacilli were grown several weeks later. In the developing world, tuberculosis is a common cause of morbidity and mortality. It is a great mimic and, because it is treatable, should always be considered in the differential diagnosis of difficult problems, even if not supported by sputum examination or chest radiography.

REFERENCES

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