Concurrent intracerebral and intramedullary spinal tuberculomas in an immunocompetent individual

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DESCRIPTION

A 28-year-old Indian man presented to us with progressive weakness of both lower limbs of 1 month duration. His physical examination revealed spastic paraparesis with a power of 2/5, bilateral lower limb hyper-reflexia and positive Babinski sign. His routine blood tests were within normal limits and he was negative for HIV ELISA. His chest X-ray showed bilateral multiple miliary shadows (figure 1). MRI of the spine performed for the evaluation of paraparesis showed multiple intramedullary ring enhancing lesions extending from D6 level up to the conus, with perifocal oedema (figure 2). MRI of the brain showed multiple well-defined ring enhancing lesions with perilesional oedema scattered diffusely in the cerebral hemispheres, brainstem and cerebellum (figure 3). The patient was diagnosed as a case of disseminated tuberculosis with multiple intramedullary and intracerebral tuberculomas. He was started on antitubercular therapy with rifampicin, isoniazid, pyrazinamide and ethambutol along with a short course of steroids. He improved with the treatment and at the end of 1 year of follow-up regained almost complete neurological function; his MRI showed near complete resolution of the tuberculomas.

Central nervous system (CNS) tuberculosis accounts for 10% of all cases of tuberculosis.¹ Of this, the ratio of cranial to spinal tuberculosis is 42:1.² Simultaneous occurrence of intramedullary and intracerebral tuberculomas is very rare and there are only a few case reports describing these coexisting lesions. Extensive disseminated tuberculosis is common in the setting of HIV infection.

Figure 2 Sagittal MRIs of the spine depicting multiple intramedullary ring enhancing lesions scattered within the dorsal and lumbar spinal cord (extending from D6 level up to the conus).

But our patient was HIV negative and this makes it a rare occurrence. CNS tuberculosis is acquired either through haematogenous spread or direct spread from a pulmonary focus. Our patient had miliary tuberculosis, which might have been the focus for CNS infection. MRI has revolutionised the diagnosis of tuberculomas and has helped in avoiding invasive procedures for diagnosis. MRI can diagnose tuberculoma with reasonable certainty and antitubercular treatment may be instituted based on these findings, as was done in our case.³ This case highlights the importance of complete screening in suspected cases of disseminated tuberculosis for institution of early and adequate therapy to obtain satisfactory results.

Figure 1 Chest X-ray showing (A) bilateral diffuse miliary shadows at diagnosis and (B) resolution of the miliary mottling after treatment with antitubercular drugs.

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Figure 3 Axial and coronal MRIs of the brain depicting multiple ring enhancing lesions scattered in the cerebral hemispheres, brainstem and cerebellum, which are hypointense with a hyperintense rim on T2-weighted sequences.

Learning points

- ▶ Concurrent occurrence of intramedullary and intracerebral tuberculomas is very rare.
- ▶ A high index of suspicion and complete screening is essential in all cases of suspected disseminated tuberculosis.
- ▶ MRI is a very sensitive and useful tool for the diagnosis of central nervous system tuberculosis.

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