Spinal cord tuberculosis: a paradoxical response to antituberculous therapy

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DESCRIPTION

A 22-year-old man, with a known case of definitive tuberculous meningitis (TBM) on antitubercular therapy (ATT) for 5 months, presented with subacute onset sensorimotor paraparesis with urinary urgency since 1 month. He had also received dexamethasone therapy 0.4 mg/kg/24 h for 1 month followed by reducing course over next 2 weeks as per British Infection Society guidelines. MRI of the spine revealed a ring enhancing intramedullary lesion at D4 level suggestive of tuberculoma along with extramedullary meningeal based heterogeneously enhancing lesion extending from D6 to D10 level suggestive of arachnoiditis (figures 1 and 2).

Paradoxical reaction in TBM refers to type IV hypersensitivity reaction manifesting as new tuberculoma and/or arachnoiditis during the course of antituberculous chemotherapy.1 The host immune response responsible for hypersensitivity reaction to protein derivatives of mycobacteria is resolved after starting chemotherapy.2 As per previous literature, spinal tuberculosis is an unusual complication of TBM.3 Spinal cord tuberculosis as a paradoxical immune response should be known as an unusual but a possible complication of TBM.

Figure 1 MRI dorsal spine sagittal images (T1-weighted image (A), T1+C (B), T2-weighted image (C)) showing ring enhancing intramedullary lesion s/o tuberculoma (arrow) and extramedullary meningeal based heterogeneously enhancing lesion with cord compression s/o arachnoiditis.

Figure 2 MRI dorsal spine axial images showing ring enhancing intramedullary lesion s/o tuberculoma (T1+C (A), arrow) and arachnoiditis with cord compression (T1-weighted image (B), T1+C (C)).
of corticosteroids and significant response in our patient favours the diagnosis of paradoxical reaction.

Learning points

▸ Development of new lesions or worsening of existing lesions is an indication of paradoxical response in CNS tuberculosis.
▸ Spinal cord tuberculosis as a paradoxical response should be considered as a rare but known possible complication of tuberculous meningitis.
▸ Corticosteroid is the recommended therapy along with antituberculous treatment.

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