Multiple Intracranial Granulomas

A 24-year-old man with family history of tuberculosis, in brother, presented with headache, projectile vomiting and unsteadiness of gait of 10 days duration. Physical examination revealed bradycardia, elevated blood pressure, papilloedema and bilateral cerebellar signs with upgoing planters. Computerized tomography (CT) scan of the head (Fig. 1) revealed multiple foci of edema. Magnetic resonance imaging (MRI) of the brain (Fig. 2) revealed multiple rounded ring lesions with regular margins, which enhanced with contrast suggestive of multiple neurocysticercosis. Chest X-ray (Fig. 3) was normal. The patient was treated with measures to reduce cerebral edema but showed only slight improvement. In view of family history of tuberculosis, CT scan of the chest (Fig. 4) was done inspite of a normal X-ray chest. Miliary tuberculosis was seen and patient showed marked improvement once anti-tubercular drugs were added to the treatment regimen. Repeat MRI of the brain done after three months showed significant resolution of the intracranial granulomas.

Intracranial granulomas are commonly due to neurocysticercosis and tuberculosis. Although in literature an attempt has been made to differentiate between “granulomas” of cysticercosis and tuberculosis on imaging as mentioned below, in practice there are fallacies invariably. If the cystic lesion shows a scolex then there is no doubt about the diagnosis of cysticercosis, otherwise there are overlaps. On T1 - weighted image tuberculosis appear as iso-intense lesions whereas cysticercus granulomas are hypo-intense. On T2- weighted images tuberculosis appear as hypo-intense lesions whereas cysticercus granulomas are hyper-intense with scolex appearing as iso-intense, if seen. On T2- weighted images tuberculosis rarely may give onion-peal appearance of alternating hypo and hyper-intense rings. Tuberculomas may appear as conglomerate of many lesions which have coalesced to form a larger lesion.

CT guided stereotactic biopsy ideally gives histopathological diagnosis but is available in a few advanced centers and is not without its inherent hazards.

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