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Tuberculous Meningitis

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Clinical Image Description

An 11-year-old girl presented with alteration of consciousness, fever, and cachexia. Her Glasgow coma score was E2V1M4. Both pupils were dilated and sluggishly reactive to light. Nuchal rigidity was found. Chest X-ray showed bilateral infiltration, and sputum AFB test was positive. An initial CT scan of the head revealed massive hydrocephalus without any obvious obstructive lesion. Immediate external ventricular drainage was done. A high proteinaceous fluid was achieved and sent for analysis. An MRI was done after the patient became stable. In T1 contrasted basal cistern enhancement compatible with basal meningitis was noticed without any spot of infarction. No abnormal vessel was found. CSF AFB was positive as well. Diagnosis of tuberculous meningitis was made. Anti-tuberculosis medication was given immediately. Her clinical improved rapidly in 2 weeks as well as decrement of CSF protein. The patient was discharged home and returned to school 3 months later.

Tuberculous meningitis is a severe form of Mycobacterium infection in developing countries. 39% of children who admitted with pulmonary tuberculosis developed tuberculous meningitis [1]. Symptoms vary from mild typical meningitis to severe comatose, opisthonus and dead [2]. Common radiological findings were hydrocephalus without obvious mass in computerized tomographic scan and basal meningitis in magnetic resonance imaging. Optochiasmatic enhancement **(Figure 1)** is commonly found and associated with visual loss [3]. CSF diversion with an extra-ventricular drainage device should be done immediately for the patient with life threatening hydrocephalous. CSF study usually showed positive. Antituberculosis should be started as soon as possible due to rapid response of disease to medication. As soon as CSF protein decreases, VP shunt can be done if indicated.

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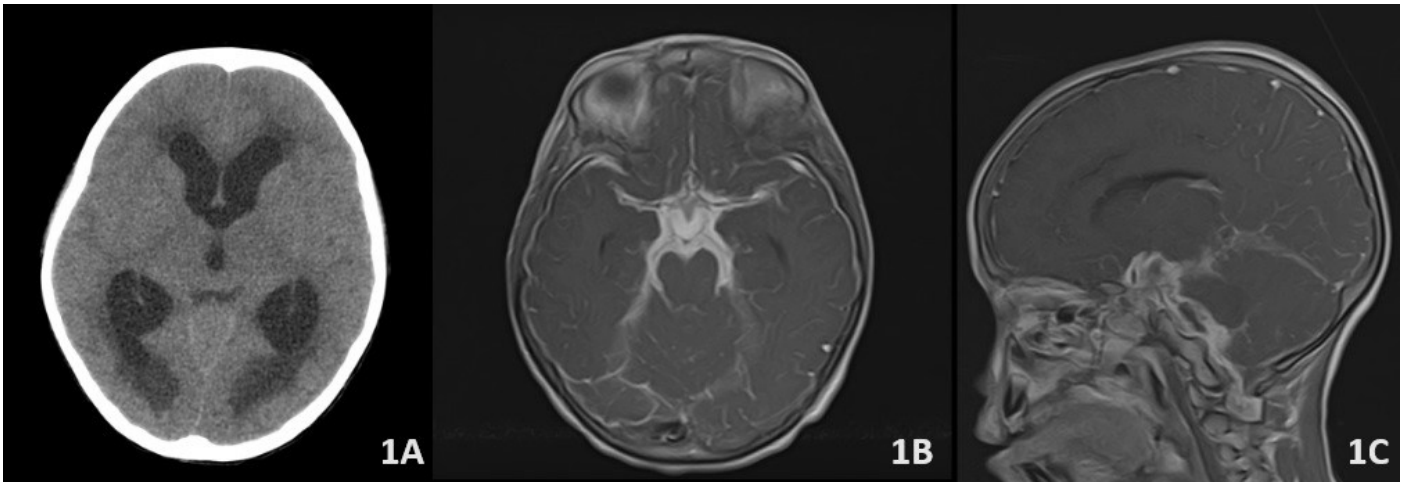

Figure 1: Common findings of tuberculous meningitis. 1A non-contrasted CT scan shows hydrocephalous without any obstructive mass. 1B-C show basal meningitis which is an enhancement at optochiasmatic region in MRI T1 with gadolinium injection.

References

1. Daniel BD, Grace GA, Natrajan M. Tuberculous meningitis in children: Clinical management & outcome. The Indian journal of medical research. 2019; 150: 117–130. https://doi.org/10.4103/ijmr.IJMR_786_17

2. Van Toorn R, Solomons R. Update on the diagnosis and management of tuberculous meningitis in children. Seminars in pediatric neurology. 2014; 21; 12–18. https://doi.org/10.1016/j.spen.2014.01.006

3. Garg RK, Paliwal V, Malhotra HS. Tuberculous optochiasmaticarachnoiditis: A devastating form of tuberculous meningitis. Expert review of anti-infective therapy. 2011; 9: 719–729. https://doi.org/10.1586/eri.11.93