

CNS Tuberculosis

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Central nervous system (CNS) involvement is one of the most important extra-pulmonary manifestations of tuberculosis (TB) causing considerable mortality and morbidity. Presentations of CNS TB are extremely variable. Treatments are generally more effective if the disease can be detected early. This study explored various clinical patterns and investigation findings that might help in early detection of CNS TB. This study was conducted to detect various clinical manifestations of adult CNS TB at an earlier stage of evaluation. This was a hospital based observational study (cross sectional type) conducted on 30 patients of CNS TB who were admitted in Sir Salimullah Medical College Mitford Hospital, Dhaka from October 2013 to April 2014. Among the participants 53% were male and 47% were female, with a male female ratio of 1.13: 1. Mean age of the participants was 35.17 ± 6.14 years. Tuberculosis involving brain (i.e. cranial TB) was most common (30.4%) in 15-24 years age group whereas spinal form of TB was most common (42.8%) in 25-34 years age group. Highest number of the cranial forms of TB was tuberculoma (52.2%) in this study and was found mostly in the young adults. Spinal TB was found in 25-34 years age group in highest number, all but one were Potts disease. Tuberculoma and tuberculous meningitis had an equal distribution in female sex while males had a higher (53.8%) occurrence of tuberculoma. Spinal involvement was commoner in male sex (43.5%). Fever was the commonest symptom noted in all forms of CNS TB patients (78.26% for brain and 71.43% for spinal cord TB patients). Most common clinical signs in brain TB were signs of meningeal irritation (65.22%), cranial nerve palsies and papilloedema while spastic paraparesis with sensory level being the commonest in spinal cases. Tuberculoma was the most frequent neuro-radiologic

findings in case of brain TB patients and paraspinal soft tissue shadow with vertebral collapse was commoner in spinal TB patients. This study has highlighted the relative frequency of various types of brain and spinal TB lesions along with the symptoms, signs and laboratory findings in Bangladeshi adult patients. In Bangladesh, tuberculosis should be always an important differential diagnosis in patients of fever with headache as well as spastic paraplegia or quadriplegia. Tuberculosis (TB) remains a major global problem and is one of the leading causes of infection-related mortality across the world. Central nervous system (CNS) involvement is noted in 5 to 10% of extra pulmonary TB cases, and accounts for approximately 1% of all TB cases. CNS TB carries a high mortality and a distressing level of neurological morbidity. In recent times, there has been a resurgence of tuberculosis due to new HIV infection, over-crowding, poor nutritional status, appearance of drug-resistant strains of tuberculosis and an increase in migration from countries where tuberculosis is prevalent to the developed world. Several studies has been done to find out presentation, diagnosis, treatment and outcomes of Tuberculous Meningitis (TBM) cases in various countries of the world, but various aspects of CNS TB as a whole, which is not always necessarily cases of TBM, are yet to be evaluated. CNS TB can be defined as tuberculous involvement of the brain and spinal cord. Granulomatous inflammation of the CNS by the *Mycobacterium tuberculosis* may involve the meninges, brain, spinal cord and the bones covering the brain and spinal cord, and its manifestations clinically depends on the specific location of the disease process⁴. It can be classified into two major forms one is Intracranial CNS TB, the other one is Spinal TB.

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