



Treatment Outcome of Cns Tuberculosis in A Tertiary Care Medical College Hospital

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ABSTRACT

To assess the treatment outcome in all forms of CNS TB with DOTS regimen, in a tertiary care Medical college Hospital. Methodology: All newly diagnosed CNS tuberculosis patients (both adult and pediatric) registered in Medical College Hospital from January 2015 to June 2015 were included in the study. DOTS treatment was given as per RNTCP guidelines.

Treatment outcome and other data were collected from the TB register maintained in the Thoracic department. Results: A total of 61 patients with CNS TB were included in the study, of whom 43 patients (80%) completed 6 months of ATT, 4 (7%) defaulted and 11 (18%) died. Out of 43, 24 (55%) patients were asymptomatic at the end of 9 months of treatment. Conclusion: Treatment for CNS TB under RNTCP is effective, but still mortality and morbidity is significantly high. Hence early diagnosis and appropriate treatment is necessary.

KEYWORDS : meningitis, RNTCP, CNS TB, DOTS

Introduction

CNS tuberculosis is more common in developing countries like India. In the world one-fourth of the TB cases occur in India annually. World Health Organization estimates that 2.1 million new cases of TB occurred in 2014 (167/100,000 population). About 2.6 million prevalent TB cases were estimated (211/100,000 population). 20 % of TB cases are extra pulmonary TB. Neurological tuberculosis consists of 5 to 10 % of the extra pulmonary tuberculosis. Tb meningitis, tuberculoma, TB radiculomyelitis are various forms of CNS tuberculosis. Among these, tuberculosis meningitis is a medical emergency. Diagnosis is based on clinical, radiological and laboratory profile of the patients. Depending upon the stage, presence of comorbid factors, delay in treatment may lead to morbidity and mortality. Empirical anti-tuberculosis therapy should be started promptly in all patients in whom the diagnosis of TBM is suspected⁽²⁾. The estimated mortality due to tuberculous meningitis in India is 1.5 per 100,000 population⁽³⁾. Aim of this study was to assess the treatment outcome in all forms of CNS TB with dots regimen, in a tertiary care medical college hospital .

Materials and Methods

This prospective, observational case series study was carried out in tertiary care Medical College Hospital during the period January 2015 to June 2015. All forms of CNS tuberculosis patients registered under DOTS regimen were included in the study. DOTS treatment was started as per RNTCP guidelines. Data were collected from the TB register maintained in our department. After 1 year of registration a cross sectional study was carried out and available clinical data were reviewed. Alive patients were called in and evaluated completely. Information regarding age, gender, place, initial symptoms, ATT history, duration of treatment, residual symptoms, other treatment history were obtained. Data analysis was performed by Pearson Chi square test. For categorical variables the percentage of patients were calculated.

Results

61 CNS TB patients were registered during the period January 2015 – June 2015. Among these, 49 (80%) were adults and 12 (20%) patients were in pediatric age group. Among these 36 (60%) were males and 25 (40%) were females. Majority of patients (52%) belonged to the age group between 15 and 35 years. Majority of patients presented

with symptoms of headache, seizures, fever. Patients clinical, radiological, CSF profile were analyzed by treating physicians. Based on the results, ATT was started as per RNTCP guidelines. Out of 61 patients, 43 patients (80%) completed 6 months of ATT, 4 (7%) patients defaulted and 11 (18%) patients died. 3 patients were lost to followup. Out of 43, 24 (55%) patients were free of symptoms at the end of 6 months of treatment and declared cured. Out of 43 patients, 17(35%) patients had extension of ATT for 3 more months. Even after extension, only 3 patients were free of symptoms. So out of 43 patients, 27 (62%) patients were declared cured . Of the 43 cases, 14 cases were complaining of persistent symptoms. Out of 61 patients, 4 (7%) patients defaulted and 11 (18%) patients died. 7 patients died within the first week of treatment. 3 patients died after 3 months of treatment and 1 patient died after 6 months of treatment. 3 patients were lost to follow up and 1 patient diagnosis was revised as CNS neoplasm.

Discussion:

CNS tuberculosis is more prevalent in developing countries like India which contributes 5 to 10% of extra pulmonary tuberculosis. National surveys showed incidence of CNS TB is 20.6 per 1 lakh population. ⁽³⁾ Despite active treatment ,the mortality is approximately 20 to 50 % which varies with disease severity and other co morbid factors. About 53% may suffer from permanent sequelae, 41% of whom had moderate to severe disability. ⁽⁴⁾ So there is an urgent need for clear cut diagnostic protocol and early initiation of anti tuberculosis treatment. In our study, 70% of study population completed ATT. Among these 62 % were cured and about 32 % were present with sequelae. Around 18 % died and 4 % were default. In our study we found that death rate is significantly high in patients who did not complete treatment when compared those who completed the treatment. We found that with extension of treatment there is no significant difference in cure rate. Even with adequate treatment, 32 % were symptomatic .This underlines the importance of early diagnosis and early appropriate treatment. The incidence of multidrug resistant tuberculosis is increasing worldwide. Appropriate investigations to diagnose MDR TB should be done in every TB patient so that early and effective treatment can be initiated. All defaulters were free of symptoms which indicate the diagnosis should be revised in them. With RNTCP regimen, significant amount of CNS tuberculosis patients are effectively cured.

But still the mortality and morbidity rate is high. So Diagnosis, treatment, monitoring and followup should be a multi-interdisciplinary approach involving physician, pulmonologist, neurologist, radiologist and other health care workers. Advanced diagnostic modalities should be considered when treating immunocompromised patients and to diagnosis MDR CNS tuberculosis.

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