



Clinical Profile of Tubercular Lymphadenitis Amongst Indian population and It's Response to Anti-Tubercular Therapy- A Retrospective Observational Study

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ABSTRACT

Introduction: India constitutes around one fifth of tuberculosis burden globally. Tuberculosis of lymph node constitutes 20-40% of extrapulmonary tuberculosis. It is difficult to determine end point of antituberculous treatment as response is to be monitored clinically. We conducted study to monitor the response to Antitubercular Therapy (ATT) in patients with tubercular cervical lymphadenitis in our tertiary care centre.

Methods: Retrospective observational study of records of 117 diagnosed cases of tubercular cervical lymphadenitis registered under DOTS at our tertiary care centre during 1st Aug 2014 to 31 Jan 2015 was done. Diagnosis was confirmed using fine needle aspiration cytology of lymph node. **Results:** Maximum patients were in the age group of 15-30 year (49.5%). 59% were Females & 41% were males. 32% of had associated dry cough, 11% had fever, weight loss in 13%, cough with expectoration in 4.27%. Extension of treatment was required in 64.50 % patients, while 35.50 % were cured with six months of DOTS therapy.

Conclusion: We conclude that patient with TB lymphadenitis usually requires more than 6 months of treatment. HIV positivity & female gender were found to be statistically significant for extension of therapy (P=0.05 & P=0.001 respectively). Associated respiratory symptoms & LN AFB positivity were NOT found to be statistically significant for extension of therapy (P=0.58 & P=0.44 respectively).

Keywords: Tubercular lymphadenitis, Anti-Tubercular treatment, Extra-pulmonary Tuberculosis, Acquired Immunodeficiency Syndrome.

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INTRODUCTION

Tuberculosis of lymph node constitutes 20-40% of extrapulmonary tuberculosis.[1] Mycobacterium tuberculosis is most common cause of tubercular lymphadenitis, however, similar disease due to non-tubercular mycobacteria is also increasingly seen in present era.[2] In developing countries where the incidence of TB is high, tuberculous lymphadenitis is one of the most frequent causes of lymphadenopathy.[3] This disease has eluded historians as King's Evil/ scrofula. People believed royal touch as its cure in past. In present days, disease still maintain a potential to grab attention of clinician with high prevalence, despite improvement in knowledge and treatment for disease. Management of lymph node tuberculosis often presents difficulties. However, most cases can be treated with drugs and surgical intervention is rarely required.[1]

Objective:

1. To monitor the response to Antitubercular Therapy(ATT) in patients with tubercular cervical lymphadenitis in our tertiary care centre.
2. To identify risk factor associated with extension of treatment in tubercular lymphadenitis.

MATERIAL AND METHODOLOGY

The study was conducted as Retrospective observational study after analysing records of 117 diagnosed cases of tubercular cervical lymphadenitis registered under DOTS at our tertiary care centre. Patients were diagnosed using fine needle aspiration cytology of lymph node. Data was compiled from records of patients who has taken ATT from 1st Aug 2014 to 31 Jan 2015. Data was organised according to Age, Gender, Respiratory symptoms, HIV status, LN AFB, DOTS category. Extension of treatment and further analysis of data was done.

RESULTS

Most of the patients (42.73%) were in age group of 15-30 year followed by 31-45year (25.64%). Out of 117 patients 69(58.97%) were females & 48(41.02%) were males. Apart from lymph node swelling, 32% of had associated dry cough, 11% had fever, 13% had weight loss. Extension of treatment was required in 74(64.10 %) patients, while 43(36.75%) were cured with six months of DOTS therapy (Figure 4). 45(65.21%) females required extension of treatment while 16(33.33%) of males required extension of treatment (Figure 1). Need for extension of treatment was higher in HIV infected patients; 87% of HIV positive patients required extension of treatment (Figure 2). Acid

fast bacilli (AFB) could be demonstrated in 51.28 % cases. Detection of acid fast bacillus in lymph node revealed need to extend treatment as compared to the one which had no AFB demonstrated in lymph node fine needle aspiration smears. 81% of LN AFB positive & 78% of LN AFB negative patients required extension of treatment (Figure 3).

DISCUSSION

The most common forms of extrapulmonary tuberculosis are lymphatic and pleural involvement.[8] out of this Tuberculous (TB) lymphadenitis is the commonest form of extrapulmonary TB.[3] In developing countries, tuberculous lymphadenitis is one of the most frequent causes of lymphadenopathy (30–52%).[4] Pandemic of Acquired Immunodeficiency Syndrome has affected epidemiology of this disease and extrapulmonary tuberculosis has gained importance due to its increasing incidence.[5] Tuberculous lymphadenitis usually presents as a gradually increasing painless swelling of one or more lymph nodes of weeks to months duration.[1] Some patients, may have systemic symptoms like fever, weight loss, fatigue and night sweats. Mediastinal lymphadenitis may present as distressing cough.[1] Tonsil is an important portal of entry, infection then spreads to nearest cervical node.[2]

On the basis of physical appearance, TB lymphadenitis divided into five stages. [6] Stage 1 has enlarged firm, mobile, discrete node showing reactive hyperplasia. Stage 2 has large rubbery nodes fixed to surround tissue. Stage 3 is due to central caseation necrosis leading to abscess formation. Stage 4 is collar stud abscess formation. Stage 5 refers to formation of sinus tract.[2] Differential diagnosis includes reactive lymphadenitis secondary to bacterial and viral infection, lymphoma, metastasis of carcinoma, toxoplasmosis and other disease of lymphoreticular system.

Definitive diagnosis is done by demonstrating AFB on histopathological section and growth of mycobacteria on culture smeared prepared from tissue.[2] Acceptable histological evidence of TB is granulomatous inflammation with caseation necrosis. However it is not possible to demonstrate AFB in every case, Fine needle aspiration cytology obtained from lymph node is also an useful diagnostic method for diagnosis tubercular lymphadenitis. [4] Cytological feature include epithelioid granuloma with or without giant cell and caseation necrosis.

Tanvir and his colleagues conducted study on 175 subjects and found that tubercular cervical lymphadenitis was common in female [10], similar to our study which also found females to be more commonly affected by tubercular cervical lymphadenitis. Generalised weakness and fever were most common symptom associated with cervical lymph node enlargement in a study by Tanvir et al [10] while our study dry cough was most common symptom followed by fever. The commonest age group affected by the disease in the study by B C Jha was 11–20 years.[11] while in present study most affected group is of age 15 -30 years. Most of the patients (78.46%) were cured with six months anti-tubercular chemotherapy in a study by M S kamal et al[12] while in our study 35.50% were cured with six months of antitubercular drug therapy & rest required extension of treatment. However, Padmapriyadarsini et al found that extension to 9 months did not improve the outcome at the end of treatment but bacteriological recurrences were significantly reduced during follow up.[9]

Treatment is done by antitubercular drugs. Surgical intervention is required rarely. [2] Shorter duration of treatment was recommended after various randomised control trials by British Thoracic Society, decreasing duration of treatment from 18 months to 6 months.[2] Balasubramanian R et al with his study at Chennai, also demonstrated efficacy of short course treatment (6-9 months), in both adults and children, with favourable response in 87 % to 99 %.[7] Intermittent regimen is as effective as daily regimen.[7] Sometimes residual lymph nodes (< 10mm) remain at end of proper treatment, literature suggest to keep close follow up of these nodes.[2].

Conclusion: Patients presenting with tuberculous lymphadenitis requires extension of treatment. HIV positive status and female gender are risk factors for the need of prolonged treatment. Initial lymph node AFB smear positive should not be criterion for prolonged treatment.

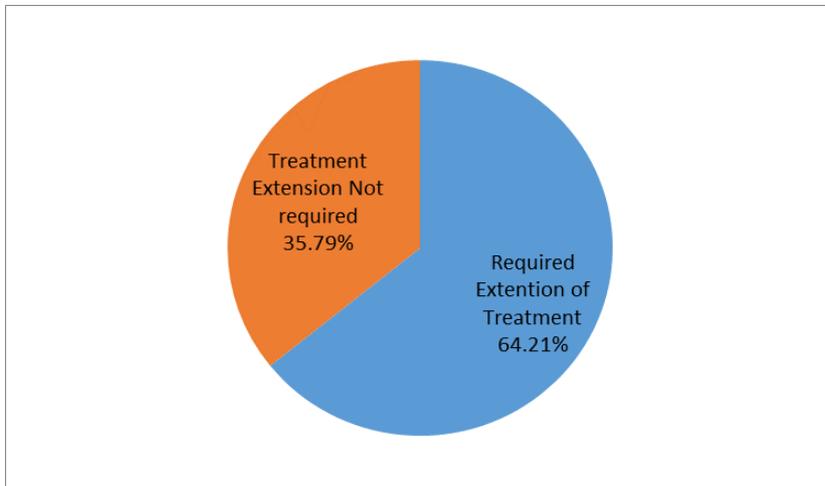


Fig.1: Showing more need to extend ATT in female patients .

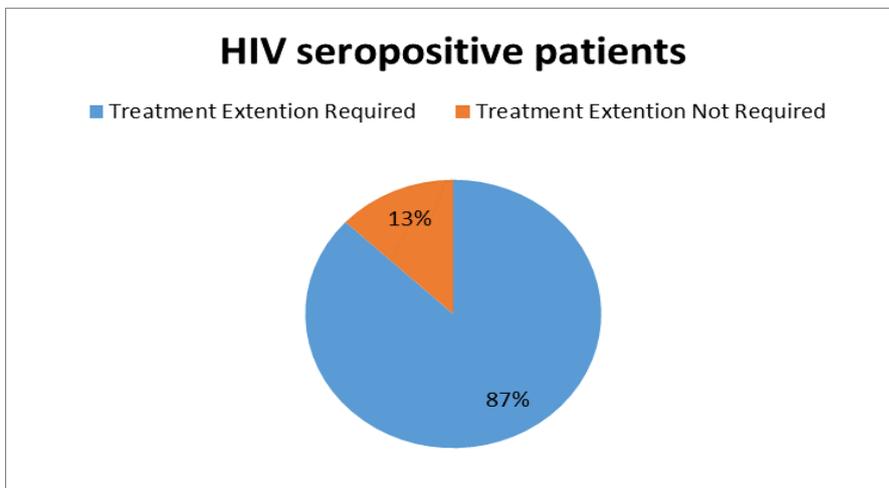


Fig. 2: Pie diagram showing more need of prolongation of treatment in HIV seropositive cases.

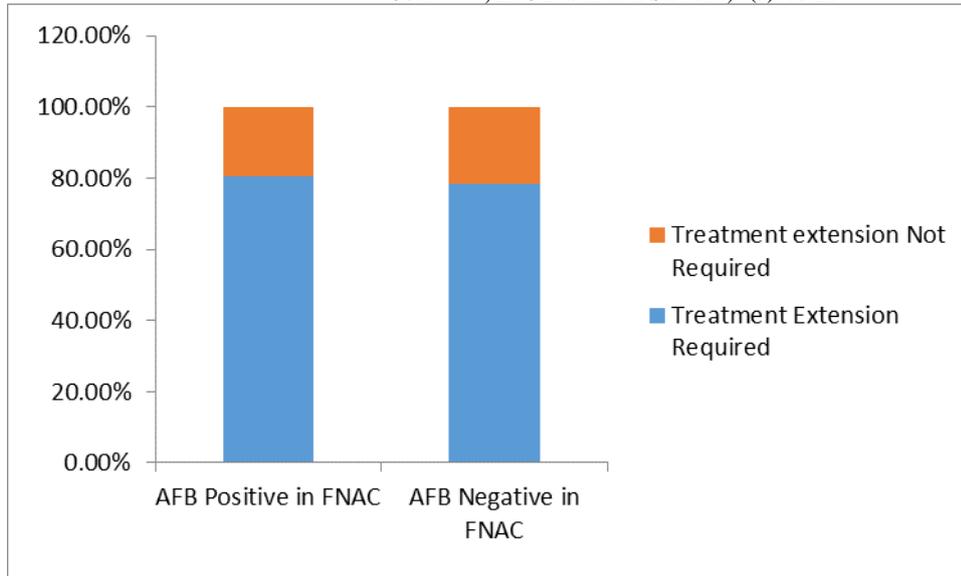


Fig. 3: Showing AFB positivity in LN FNAC not significantly associated with treatment extension.

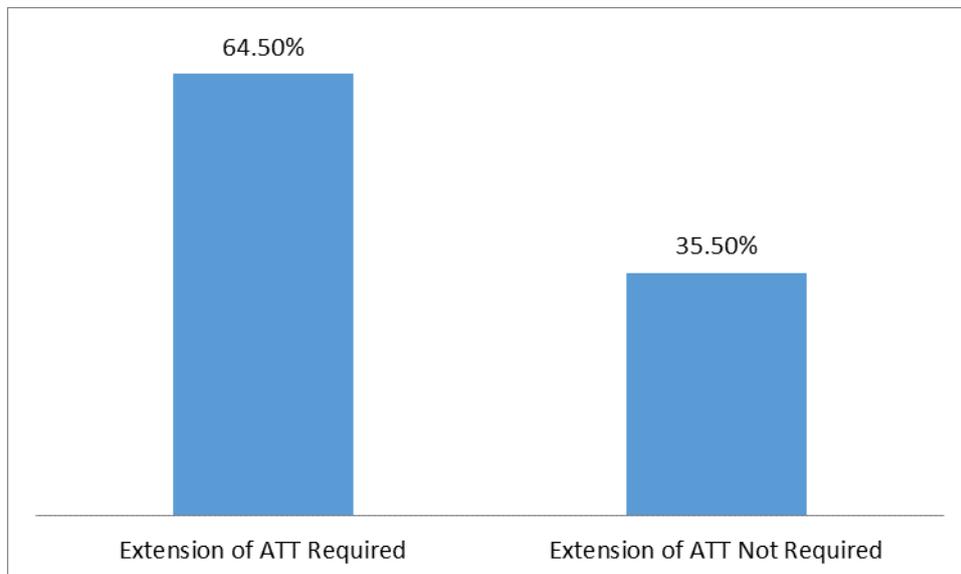


Fig. 4: Showing Percentage of patients requiring extension of ATT.

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