A Hospital-Based Cross-sectional Study on Clinico-demographic Characteristic of Extrapulmonary Tuberculosis Cases Coming to a Tertiary Hospital of Bihar

Sir,

Though India is the second-most populous country in the world one-fourth of the global incident tuberculosis (TB) cases occur in India annually. As per the WHO Global TB Report,[1] 2015, out of the estimated global annual incidence of 9.6 million TB cases, 2.2 million were estimated to have occurred in India. There are no reliable data available, but it is expected that 15%–20% of all TB is extrapulmonary.[2] Its prevalence in the country varies between 8.3% and 13.1% in different districts according to cohort analysis by Central TB Division, Ministry of Health and Family Welfare in 2002.[3] Extrapulmonary TB (EPTB) is more common in immunocompromised individual such as HIV infection. Many forms of EPTB are paucibacillary, and that make diagnosis challenging. Clinical presentations of extrapulmonary TB (EPTB) may be diverse, leading to incorrect and delayed diagnoses. Some studies[4] have suggested that the predominant sites of EPTB may vary according to geographic location, population groups, and a wide variety of host factors. In compare to pulmonary TB, there are very few studies which look on clinico-demographic characteristic of EPTB.

All the patients diagnosed as EPTB cases in AIIMS Patna between January 2015 and December 2016 were separated and analyzed. The data were entered into a structured pro forma. The outcome variables included demographic (age and sex), clinical (disease classification, type of TB, site of EPTB, and bacteriological evidence (smear positive for AFB or Genexpert positive).

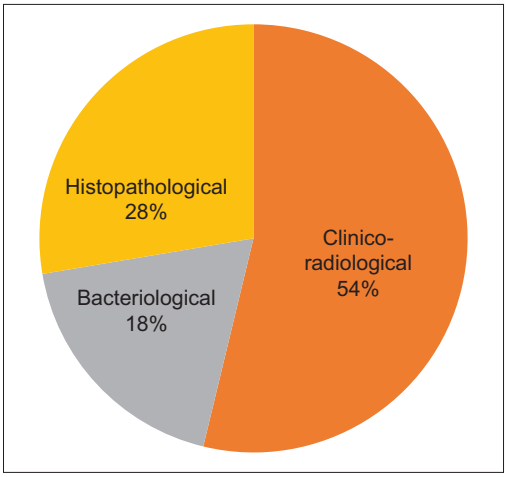

Figure 1: Diagnostic basis in extrapulmonary tuberculosis

A total of 517 EPTB patients received treatment in 2015–2016. The most common EPTB found was lymph node TB (37.14%) which is in line with other study.[5] The second-most common type varies in different studies. This study found pleural effusion (20.7%) as second-most common type which is similar to other studies.[6] This difference could be related to sociodemographic factors, immunocompromised status and diagnostic capabilities. HIV was found in 2.12% which is less in compare to other study.[7] Cervical lymph node was found most common lymph node TB [Table 1]. Mediastinal lymph node enlargement may be underestimated because not all patients subjected for computed tomography chest which is more diagnostic test to detect mediastinal lymphadenopathy. Large number of patients (5.61% cold abscess and 7.55% other TB) have unclassified area of TB lesion. The overall incidence of EPTB was found equal in male and female (50.68% vs. 49.32%). Females are more affected than male in lymph node, CNS, and Genitourinary TB. Pleural and Bone TB were more common in patients having age more than 44 years. We found Abdominal TB more commonly in the age group less than 14 years. More than half of EPTB patients have been put on treatment on chinico-radiological suspicion Bacteriological diagnosis has been made in 18% of patients in which 88.54% smear positive and 11.4% are gene-xpert positive [Table 1]. Tissue diagnosis in form of granuloma was found in 28% of patients [Figure 1]. Almost half of the lymph node TB were smear positive for acid-fast bacilli which is more than previous studies.[8]

Lymph node TB was the most common EPTB followed by pleural effusion. There are significant numbers of a patient who remain unclassified. Despite advances in TB diagnostics, most of the patients put on treatment on clinico-radiological basis.

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Conflicts of interest

There are no conflicts of interest.

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Table 1: Prevalence of various extrapulmonary types

EPTB type	Total (%)
Lymphadenitis	192 (37.14)
Cervical	120 (23.21)
Axillary	9 (1.74)
Inguinal	2 (0.39)
Mediastinal	39 (0.58)
Auricular	3 (0.58)
Unspecified	55 (10.64)
Pleural effusion	107 (20.70)
Bone	61 (11.8)
Abdominal	45 (8.70)
Cold abscess	29 (5.61)
Genitourinary	26 (5.03)
CNS	15 (2.90)
Pericardial effusion	2 (0.39)
Other	39 (7.55)

EPTB: Extrapulmonary tuberculosis, CNS: Central nervous system

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References

1. World Health Organization. Report on Global Tuberculosis Control: Epidemiology, Strategy, Financing. Geneva, Switzerland: World Health Organization; 2015. p. 1-9.
2. Sharma SK, Mohan A. Extrapulmonary tuberculosis. Indian J Med Res 2004;120:316-53.
3. Jones BE, Young SM, Antoniskis D, Davidson PT, Kramer F, Barnes PF, *et al.* Relationship of the manifestations of tuberculosis to CD4 cell counts in patients with human immunodeficiency virus infection. Am Rev Respir Dis 1993;148:1292-7.
4. Yang Z, Kong Y, Wilson F, Foxman B, Fowler AH, Marrs CF, *et al.* Identification of risk factors for extrapulmonary tuberculosis. Clin Infect Dis 2004;38:199-205.
5. Peto HM, Pratt RH, Harrington TA, LoBue PA, Armstrong LR. Epidemiology of extrapulmonary tuberculosis in the United States, 1993-2006. Clin Infect Dis 2009;49:1350-7.
6. Kourbatova EV, Leonard MK Jr., Romero J, Kraft C, del Rio C, Blumberg HM, *et al.* Risk factors for mortality among patients with extrapulmonary tuberculosis at an academic inner-city hospital in the US. Eur J Epidemiol 2006;21:715-21.
7. Leeds IL, Magee MJ, Kurbatova EV, Del Rio C, Blumberg HM, Leonard MK, *et al.* Site of extrapulmonary tuberculosis is associated with HIV infection. Clin Infect Dis 2012;55:75-81.
8. Gupta SK, Chugh TD, Sheikh ZA, Al-Rubah NA. Cytodiagnosis of tuberculous lymphadenitis. A correlative study with microbiologic examination. Acta Cytol 1993;37:329-32.

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