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ORIGINAL ARTICLE

Study of the Clinical Profile and Site Proclivity of Extrapulmonary Tuberculosis at Tertiary Care Center of Rohilkhand Region, Bareilly

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ABSTRACT

Aim: To study the clinical profile and site proclivity of extrapulmonary tuberculosis (EPTB) at tertiary care center of Rohilkhand region, Bareilly.

Materials and methods: Among 329 patients, the study was conducted on 108 patients with EPTB. The analysis included patients who were diagnosed for EPTB between May 1, 2015 and October 31, 2015 in a tertiary care hospital, Rohilkhand region, Bareilly, Uttar Pradesh.

Results: Among the EPTB cases studied, 62 (57.4%) were males. About 96 (88.8%) patients received Category (CAT)1 treatment and 12 (11.1%) patients received CAT2 treatment. Overall, the total number of different types of EPTB cases included lymph node (n = 44, 40.7%), human gastrointestinal tract (n = 18, 16.6%), pleura (n = 34, 31.4%), skeletal (n = 5, 4.6%), central nervous system (n = 3, 2.7%); other sites included mainly breast (n = 2, 3.2%), genitourinary (n = 1, 2.6%), and skin (n = 1, 2.6%).

Conclusion: Extrapulmonary tuberculosis still constitutes an important clinical problem. In this study, we assessed the site of predilection of EPTB patients, which constituted 32.8% of all tuberculosis cases presented to our center during the study period. Lymph node tuberculosis is the most common type.

Keywords: Breast, Extrapulmonary tuberculosis, Gastrointestinal, Lymph node.

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INTRODUCTION

Tuberculosis (TB) is one of the leading causes of death in the world. Globally, around 8.8 million people develop TB and 1.45 million people die every year due to TB.[1]

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The burden of TB in India is the highest, accounting for one-fifth (21%) of the global incidence. Tuberculosis mortality in the country, as well as the prevalence of TB, has reduced from 1990 to 2010 as per the World Health Organization (WHO) global TB report.[2]

Tuberculosis can involve any organ system in the body. While pulmonary TB is the most common presentation, extrapulmonary tuberculosis (EPTB) is also an important clinical problem.[3-5]

In India, EPTB comprises 20% of all TB cases.[6,7]

The term EPTB has been used to describe isolated occurrence of TB at body sites other than the lung. However, when an extrapulmonary focus is evident in a patient with pulmonary TB, such patients have been categorized under pulmonary TB as per the guidelines of the WHO.[8]

Recent studies have suggested that the sites of EPTB may vary according to geographic location, population groups, and a wide variety of host factors.[9-12]

Tertiary care centers appear to be an excellent place for medical education and operational research in this regard.[13]

MATERIALS AND METHODS

Patients

This study was carried out at the Rohilkhand Medical College and Hospital, Bareilly, Uttar Pradesh, and included all patients who were diagnosed as EPTB during the period of 6 months between May 1, 2015, and October 31, 2015, in a tertiary care hospital, Rohilkhand region, Bareilly, Uttar Pradesh.

Methods

The data were collected from patients. All cases were subjected to the following protocols.

A prospective study was conducted in 108 EPTB patients diagnosed between May 1 2015, and November 1, 2015 in a tertiary care hospital, Rohilkhand region, Bareilly, Uttar Pradesh.

A detailed clinical data were noted in predesigned datasheet and analysis was done to evaluate the site predilection of EPTB.

All cases with EPTB were included in the study.
All cases with pulmonary TB were excluded.
Relevant investigations were carried out as per need.

RESULT

Among the total 108 EPTB patients, 62 (57.4%) were males and 46 (42.5%) were females.

Tables 1 to 5 show the basic demographic profile.

Table 1: Age group

Age group (yrs)	*No. of patients (n = 108)*
1–20	46 (42.5%)
21–40	42 (38.8%)
41–60	12 (11.1%)
61–80	6 (5.5%)
>80	2 (1.8%)

Table 2: Gender

Gender	*No. of patients (n = 108)*
Male	62 (57.4%)
Female	46 (42.5%)

Table 3: Weight band

Weight in kg	*No. of patients (n = 108)*
<30	10 (9.2%)
30–40	41 (37.9%)
41–50	48 (44.4%)
51–60	8 (7.4%)
61–70	1 (0.9%)
>70	–

Table 4: Site predilection

Site	*(n = 108)*	*Percentage*
Lymph node	44	40.7
Pleura	34	31.4
Gastrointestinal	18	16.6
Skeletal	5	4.6
Central nervous system	3	2.7
Breast	2	3.2
Genitourinary	1	2.6
Skin	1	2.6

Table 5: Association of site and gender

Site	*Male*	*Female*
Lymph node	18	26
Pleura	25	9
Gastrointestinal	11	7
Skeletal	3	2
Central nervous system	2	1
Breast	0	2
Genitourinary	0	1
Skin	1	0

DISCUSSION

Among 108 EPTB patients during the study period, 62 (57.4%) were male and 46 (42.5%) patients were female. A male preponderance was also observed by various workers in their studies [Zenebe et al,[14] 181 (52.6%); Mavila et al,[15] 112 (59.5%); Ilgazli et al,[13] 345 (54.2%)].

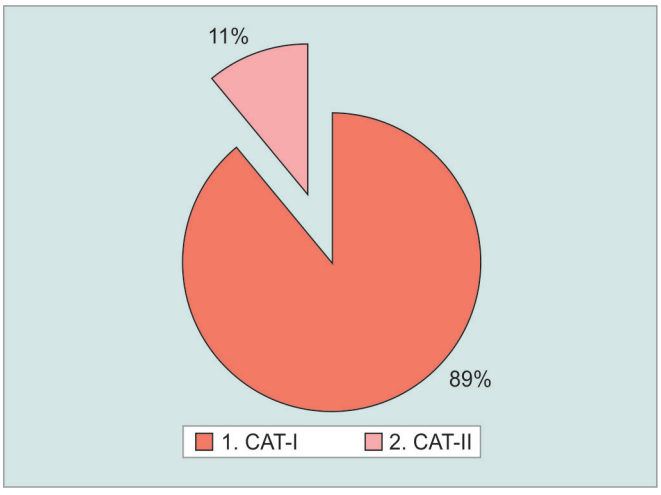
The majority of cases (88, 81.3%) lie in the age group between 1 and 40 years. Average age calculated was 26 years. The majority of the patients (89, 82.3%) were in between weight band of 30 and 50 kg.

The EPTB was observed to be 32.8% of cases of TB. Various workers have also observed EPTB varying from 23.2 to 52.08% [Gonzalez et al,[16] 538/1878 (28.6%); Mavila et al,[15] 187/359 (52.08%); Prakasha et al,[12] 528/1267 (41.67%); Hatwal et al,[17] 58/250 suspects (23.2%)].

The higher detection rate at this tertiary care center is due to the reasons, such as more referrals from the peripheral health institutions and other clinical departments; better and prompt diagnostic facilities available in central laboratory and the Department of Pathology, Microbiology, and Biochemistry; prolonged outpatient department hours; availability of qualified and trained medical and paramedical staff; better procedural facilities, such as bronchoscopy, intercostal chest tube drainage, thoracocentesis, histopathological fine needle aspiration cytology and biopsy; imaging-ultrasonography, computed tomography; and other radiodiagnostic facilities.

Many studies predicted that mostly pleura and lymph nodes are likely to be involved; Gonzalez et al[16] reported 538 EPTB cases (28.6%) in a total of 1878 enrollees. The most common sites of infection were lymph nodes (43%) and pleura (23%). In the same study, African-American ethnicity was found to be an independent risk factor for EPTB. Van Loenhout-Rooyackers et al[18] observed that lymph node involvement was the most common site in the body. However, Humphries et al[19] observed the most common sites were pleura, followed by lymph node; and one-third of all cases had pulmonary TB. Recently, Ilgazli et al[13] reported 636 cases with EPTB, out of which 56.3% were lymph node TB, followed by (31.1%) pleural TB. In our study, 44 (40.7%) patients had TB lymphadenitis, followed by 34 (31.4%) patients with pleural involvement. Gonzalez et al[16] and Hatwal et al[17] also observed lymph node involvement as the commonest form of EPTB in their studies.

About 96 (88.8%) patients received Category (CAT)1 treatment and 12 (11.1%) patients received CAT2 treatment. Mavila et al[18] prescribed Directly Observed Treatment Short-Course CAT-I treatment in 90.9% of their cases (Graph 1).



Graph 1: Treatment given

CONCLUSION

Extrapulmonary tuberculosis still constitutes an important clinical problem. In the current study, we assessed the site of predilection of EPTB patients. In this study, EPTB cases constituted 32.8% of all TB cases presented to our center during the study period. Lymph node TB is the most common type.

LIMITATIONS

This is a single center study. A follow-up study after treatment was not done. Clinical presentations of different types of EPTB were not studied.

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