

Study of Outcome of Extra Pulmonary Drug Resistant Tuberculosis Patient at Nodal Drug Resistance Tuberculosis Centre, Nashik

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Conflict of interest: Nil

Abstract

Background: India leads in highest share of global burden followed by China and the Russian Federation. In 2019, MDR/RR TB was found in 3.3% new TB cases and 18% in previously treated cases. There is limited information on the prevalence and the drug-resistant patterns of MTB in patients with extra-pulmonary tuberculosis (EPTB). Thus, this study was aimed to determine the drug resistance patterns of M.TB in patients with EPTB and outcome of those affected.

Materials and Methods: Retrospective study was conducted during period of December 2020 to March 2021 on patients diagnosed as extra pulmonary multidrug resistant tuberculosis. Study was done study the clinical profile and treatment outcome.

Results: Our study found 54 patients to have extra pulmonary drug resistant tuberculosis, 66.6% were females while males were 33.3% and mostly affected were age group of 21-29 age (26.4%). Lymph node involvement most common in our study group. 74% patients were resistant to rifampicin. Treatment showed favorable outcome in majority of cases.

Conclusion: We found 8.85 % of EP DR TB cases at our centre and with good treatment outcome and stressing the fact concomitant history of pulmonary TB in 14.81%

Keywords: EP DR TB.

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Introduction

Globally, the burden of multidrug- or rifampicin-resistant TB (MDR/RR-TB) as newly diagnosed cases of tuberculosis remains stable. In 2019, MDR/RR-TB was found in 3.3% new TB cases and 18% in previously treated cases. India leads in highest share of global burden followed by China and the Russian Federation.[1]

Rifampicin-resistant tuberculosis can be one of the following - Rifampicin mono-resistant, Multidrug-resistant (MDR TB) (that is, resistant to both rifampicin and isoniazid), extensively drug-resistant (that is, multidrug-resistant plus resistance to fluoro-quinolones and second-line injectable drugs), or Pre-XDR (multidrug-resistant plus resistance to either a fluoroquinolone or a second-line injectable drug).[2]

TB can involve any site and it can be classified as pulmonary or extrapulmonary TB (EP-TB). Similarly, EP DR-TB consists of a vast clinical spectrum and a formidable challenge with scarce literature. Therefore EP-TB often presents as diagnostic and therapeutic dilemma We aim to study the clinical profile and treatment outcomes of EP DR-TB under the programmatic setting.[3]

There is limited information on the prevalence and the drug-resistant patterns of MTB in patients with extra-pulmonary tuberculosis (EPTB) . Thus, this study was aimed to determine the drug resistance patterns of M.TB in patients with EPTB and outcome of those affected.[4]

Materials and Methods

The study was conducted in DR TB Centre of department of Respiratory

Medicine at a tertiary care hospital from December 2020 to March 2021.

It was retrospective study and patients of extra pulmonary MDR & XDR TB were noted and enrolled into our study. The patients admitted in duration of January 2019 to March 2020 and who received the treatment under programmatic DR TB guidelines were enrolled for study and data was collected accordingly.

Inclusion criteria –

All the patient who were diagnosed as extra-pulmonary MDR / XDR TB admitted in duration of January 2019 to March 2020 were included.

Exclusion criteria –

Patients of Incomplete data were not enrolled in the study.

Aim of the study was to estimate proportion of Extra pulmonary drug resistance tuberculosis patients and to study the clinical outcome and to study the pattern of Extra pulmonary drug resistance tuberculosis in these patients

Data was collected analyzed with appropriate statistical method.

Results

1) Demographic variables

During the study period April 2019 to March 2020 total of 54 patients were found to have extra pulmonary drug resistant tuberculosis out of which 18 were male (33.33 %) and 36 were females (66.66 %)(Fig 1).

The most common age group affected was found to be between 21-29 years (46.29%) followed by 10-20 years group (25.92%) while the least affected group was 60 – 69 years of age (1.85%)(Fig 2).

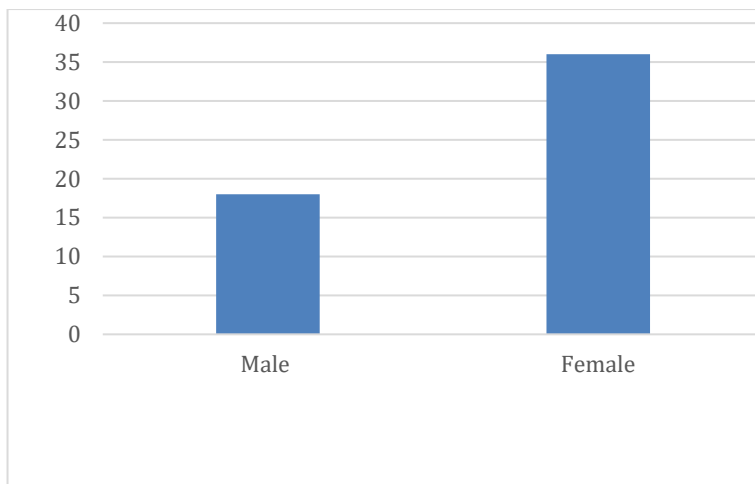


Figure 1: Sex Distribution

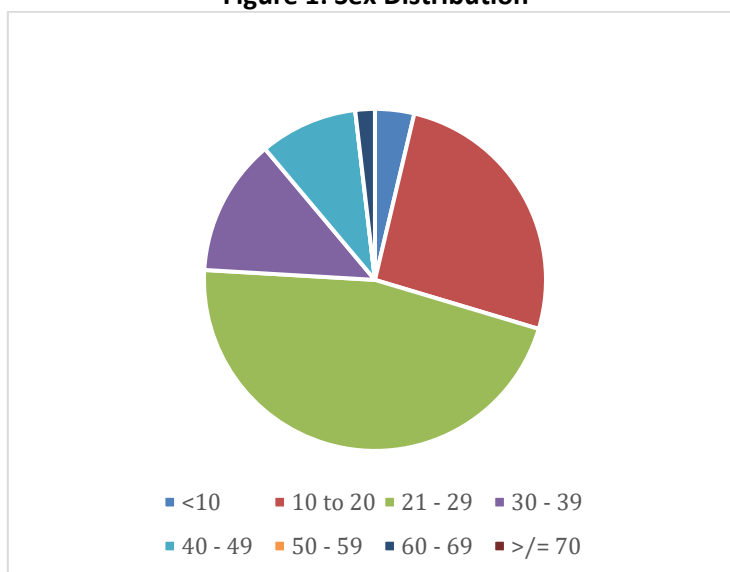


Figure 2: Age group distribution

2) Organ involved
Lymphnodes involvement accounted for the highest incidence with 38 patients (70.37%) followed by bone involvement

of 7 patient (13%) . Drug resistant tuberculosis was found in equal amount in breast abscess and central nervous system.

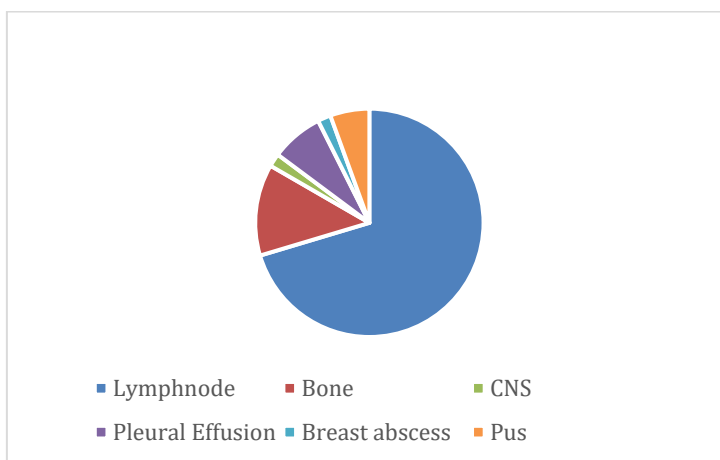


Figure 3: Organ Involvement

3) History of Tuberculosis -

Eight patients were found to have a past history of Pulmonary TB while seven patients had past history of extrapulmonary TB. Three patients were contacts with patients of DS/DR TB cases.

Out of the total study population 74% patients were reported as Rifampicin resistant ;

11.11% were labelled as Pre XDR FQ resistant . Fluoroquinolone and isoniazid resistance was found in equal percentage in the study group.

4) Pattern of drug resistance –

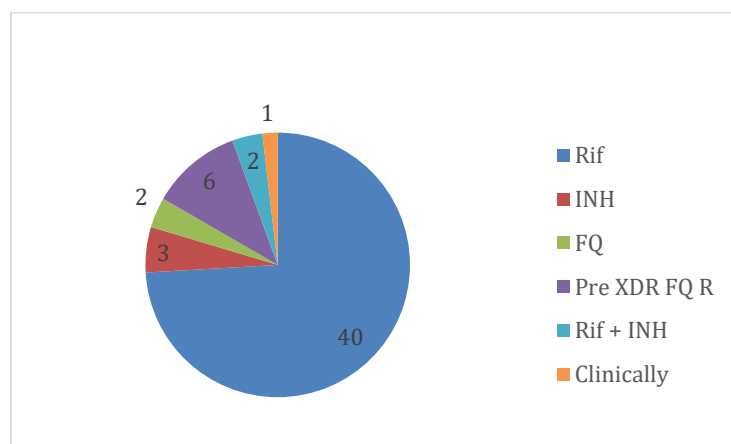


Figure 4: Drug resistance Pattern

5) Outcome of the study group-

Forty two patient (77.77%) completed the treatment course. Five patient (9.25%) died during the treatment course. Five patient (9.25%) were labelled as defaulter. One patient (1.85%) was labelled as lost to follow up. One case (1.85%) was transferred out from the DRTB centre.

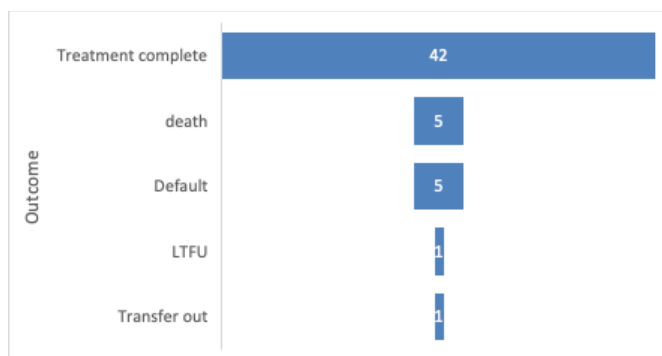


Figure 5: Outcome

Discussion

The proportion of extra pulmonary DR TB cases in a study was found to be at 4.4 % of all DR TB cases (3) and our study found the proportion to be at 8.85%. This figure is found to be at

lower side in extra pulmonary as compared with DS TB.

Availability of universal drug susceptibility has increased the diagnosis of DR TB and understanding the resistance pattern of the disease. We found that extra pulmonary DR TB to

be found in younger age group (72%) with predominant female age group (66%). These findings were found to be consistent with other studies published.[5-6]

Involvement of lymph nodes in DR Tb cases was found to be in thirty eight patients (70.37%) which is also on the lines of DS TB cases and consistent with study of Suryawanshi SL et al. [7] We report DR TB in bone to be second most common followed by pleural disease. This findings are contrast to the data published by Indian supranational laboratory, NIRT [8]

HIV co-infection was found to be in four cases (7.40%) and one patient was pregnant at time of initiation of treatment . Eight patients were found to have a past history of Pulmonary TB while seven patients had past history of extrapulmonary TB. Three patients were contacts with patients of DS/DR TB cases.

Contrary to the findings of other studies we found higher resistant to rifampicin followed by Pre XDR FQ resistant . Unnati Desai et al reported higher resistant to pre XDR FQ. [3]

Forty-two patient (77.77%) completed the treatment course. Five patients (9.25%) died and defaulted each respectively. One patient was transferred out and follow up couldn't be assessed.

Due to retrolective nature of the study we couldn't assess the reason for default and cause of death in the study group.

Conclusion:

We found 8.85 % of EP DR TB cases at our centre and with good treatment outcome and stressing the fact concomitant history of pulmonary TB in 14.81%.As 9.25% patients died and defaulted each respectively; due to retrolective nature of study we couldn't ascertain reason of default and reason of death.

We recommend such prospective studies to be conducted in future to understand the reason of default or cause of death in such cases.

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