Introduction

Pakistan has a high burden of endemic Mycobacterium tuberculosis complex (MTC) disease. Extrapulmonary tuberculosis (EPT) is defined as Mycobacterium Tuberculosis (MTC) infection involving any part of the body other than the lung. EPT is seen in 20% of MTC infection in Pakistan, diagnosis is often delayed, and timeliness of initiation of treatment is extremely varied. We conducted a retrospective study to identify the role of early clinical diagnosis and treatment on patients with EPT.

Methods

Retrospective review of EPT diagnosed at Pakistan Institute of Medical Sciences (PIMS), Islamabad, Pakistan. All cases diagnosed and treated as EPT from January to June 2016 were included. Demographic, clinical and laboratory data was extracted from PIMS Medical records and TB01 cards from the National TB Control Program Pakistan. All patients were contacted to determine outcome status. Study was approved from National TB control Program.

Results

275 patients were identified who received a diagnosis of EPT. Mean age was 34.4 years; ratio of men to woman was 1.3:1. Pleural tuberculosis was the most common site involved (28.7%). The next most frequent site involved was lymphatic disease (20.3%). 47.6 percent of patients (113/275) were diagnosed by clinical criteria alone (i.e., symptoms and radiographic imaging). The overall cure rate was 82.9%. There was no difference of cure rates between the cure rates of males and females. Diagnosis based on clinical criteria was associated with significantly higher cure rate (87.6% vs. 79.6%, p=0.038) and lower mortality (5.3% vs. 9.3%, p=0.041) compared to laboratory based diagnosis (5.3% vs. 9.3% respectively). Improved outcomes and mortality benefit was seen in patients who were treated based on clinical criteria as compared to those in whom treatment was delayed due to biochemical confirmation (Odds ratio: 0.29, 95% CI: (0.086-0.95). Sixteen cases were lost to follow up.

Conclusion

Early initiation of treatment based on clinical criteria was associated with lower mortality and overall outcome benefit in our study cohort. However, further larger studies of patients with EPT are required to validate our observation.