774. Extrapulmonary Tuberculosis: Impact of Early Diagnosis and Treatment on Mortality
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Background. Pakistan has a high burden of endemic Mycobacterium tuberculosis (M. tuberculosis) infection.
Extrapulmonary tuberculosis (EPT) is seen 20% of MTC infection in Pakistan, diagnosis is often delayed, and
timeliness of initiation of treatment is extremely varied. We conducted a retrospective review of all cases of EPT presenting to a large public hospital in Islamabad, Pakistan,
to identify the role of early diagnosis and clinical treatment on patients with extra pul-
monary tuberculosis.
Methods. Retrospective review of EPT diagnosed at Pakistan Institute of Medical Science (PIMS), Islamabad, Pakistan. All cases of EPT were treated as EPT from January to June 2016 were included. Demographic, clinical and laboratory data were
taken 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. Two hundred seventy-five patients were identified who received a diag-
nosis 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%). 46.7% percent of patients (113/257) were diagnosed with clinical criteria and radiographic imaging. There
were only three cases of culture confirmed EPT in the cohort. 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 rates (P = 0.001) and lower mortality (P = 0.001) compared with laboratory-based diagnosis (5.3% vs. 9.3%, respectively). Improved
outcomes and mortality benefit seen in patients who were treated based on clinical
criteria as compared with those in whom treatment was delayed due to biochemi-
cal confirmation ( Odds ratio 0.28, 95% CI 0.86-0.95). 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 observations.
Disclosures. All authors: No reported disclosures.

775. An Epidemiological Analysis of Patients With Multidrug-Resistant Tuberculosis Among Tibetan Refugees in India
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Background. Globally, refugee populations face an increased risk for tuberculosis (TB)
due to malnutrition, overcrowding, and poor living conditions. Compared to the
Indian urban population, Tibetan refugees in India display a higher incidence rate of
both TB and multidrug-resistant TB (MDR-TB). The high incidence of MDR-TB in
younger population is a serious public health concern.
Methods. We retrospectively reviewed the medical records of patients with MDR-TB
who received treatment from January to December 2013 at Tibetan Delek Hospital, which
is the center of TB control among Tibetan refugees. Patients were classified into either
ew cases (suspected infection by exposure to MDR-TB) or previously treated
MDR-TB cases (suspected acquisition of MDR-TB through anti-TB treatment or by
MDR-TB exposure after treatment). We compared patients’ age, sex, birthplace, resi-
dence type, occupation, contact history, and treatment outcome.
Results. Of 749 patients with TB, we enrolled 134 patients with MDR-TB
[median age, 26 (interquartile range: 22–35) years; males, 55%]. The Tibetan
ethnicity comprised 96% of the study population, whereas Indians (trans-Himalayan)
comprised 4%. The birthplace was Tibet for 22% patients, India for 75%, and Nepal for 2%.
New MDR-TB cases were 28% and previously treated MDR-TB cases were 72%. Failure
was observed in 42% patients and cured and completed in 54% patients, during their
previous TB treatment. The median age was significantly lower in new cases than in
previously treated MDR-TB cases (8 years; P = 0.001). Tibet was the birthplace of
34% new cases and 18% in previously treated cases (P = 0.04). The residence was of
the congregation type in 58% of new cases and 30% in previously treated MDR-TB cases (P = 0.011).
The occupation was “student” and “unemployed” in 58% and 8% in new
cases and 33% and 24% in previously treated cases (i.e., symptoms and radiographic imaging). Contact
history with TB type and treatment outcome were not considerably different, although
the rates of cured and completed were high in both (82%) and previously treated
(84%) MDR-TB cases.
Conclusion. This study shows that new MDR-TB correlates with younger
age, birth in Tibet, congregation residence, and student occupation. Targeting the
above-listed characteristics could be effective in further reducing the MDR-TB transmission among Tibetan refugees in India.

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776. Tuberculosis Screening Among People Living With HIV in Arkansas: A Ryan White Program Evaluation

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Background. The current TB screening practice among people living with HIV in the United States is understudied. In our preliminary study, we found that only 6 (12%) US states recommended TB screening in their HIV guidelines; and only half of the Ryan White Programs capture client TB status. In this ongoing project, we aim to determine the prevalence of TB screening among people living with HIV in Arkansas; inform policy revisions; and ultimately reduce the burden of TB-HIV comorbidity.

Methods. We generated a sample of patients who received Ryan White service during the last grant year (April 1, 2016 to March 31, 2017) from CAREWare (Ryan White client database). We reviewed these patient files in multiple site visits and collected data on TB screening practice. We then performed descriptive analysis and multivariate logistic regression to analyze TB screening patterns in Arkansas.

Results. To date, we reviewed 728 patient records from 22 clinics across Arkansas during a 6-month study period. Three hundred sixty-seven (50%) patients have baseline (HIV diagnosis) TB status. On the basis of the multivariate logistic regression model (adjusting for age, gender, race, and patient residence), TB screening among Ryan White patients vary significantly by clinical regions in Arkansas (P < 0.0001). As compared with the central region, HIV patients in the North Central clinical region are more likely to be screened for TB (OR, 23.28; 95% CI, 5.29, 102.49); and HIV patients in the Northeast clinical region are less likely to be screened (OR, 0.05; 95% CI, 0.01, 0.30).

Conclusion. We observed in Arkansas (1) low adherence to recommendations for TB screening among people living with HIV and (2) insufficient HIV surveillance infrastructure to capture TB status, and (3) geographic variations in TB screening practice among people with HIV, indicating the need for (1) clearer guidelines, (2) stronger TB education among providers, and (3) program collaboration and service integration between TB and HIV. In our next steps, we want to explore further into the regional variations in TB screening among people with HIV, in order to tailor interventions to different geographic regions. We also want to examine changes in TB screening practice after implementation of the new contract, and to determine the optimal frequency of TB screening among people living with HIV.

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777. Ten-Year Experience of Tertiary Hospital Regarding Epidemiology, Diagnostic Method, and Drug Resistance of Tuberculosis—Jeddah, Saudi Arabia

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Background. The prevalence of tuberculosis across Saudi Arabia is variable with western provinces have the highest incidence. This study aimed to determine the epidemiology of tuberculosis in Jeddah, the age and gender distribution and the accuracy of conventional diagnostic method, for better understanding of tuberculosis-resistant pattern in the country.

Methods. Three hundred forty-four culture proven tuberculosis where collected during a 6-month study period. Three hundred sixty-seven (50%) patients have baseline (HIV diagnosis) TB status. On the basis of the multivariate logistic regression model (adjusting for age, gender, race, and patient residence), TB screening among Ryan White patients vary significantly by clinical regions in Arkansas (P < 0.0001). As compared with the central region, HIV patients in the North Central clinical region are more likely to be screened for TB (OR, 23.28; 95% CI, 5.29, 102.49); and HIV patients in the Northeast clinical region are less likely to be screened (OR, 0.05; 95% CI, 0.01, 0.30).

Conclusion. We observed in Arkansas (1) low adherence to recommendations for TB screening among people living with HIV and (2) insufficient HIV surveillance infrastructure to capture TB status, and (3) geographic variations in TB screening practice among people with HIV, indicating the need for (1) clearer guidelines, (2) stronger TB education among providers, and (3) program collaboration and service integration between TB and HIV. In our next steps, we want to explore further into the regional variations in TB screening among people with HIV, in order to tailor interventions to different geographic regions. We also want to examine changes in TB screening practice after implementation of the new contract, and to determine the optimal frequency of TB screening among people living with HIV.

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778. Trend of Tuberculosis Meningitis and Associated Mortality in Texas, 2010–2017, A Large Population-Based Analysis

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Background. As the most severe form of tuberculosis (TB), TB meningitis (TBM) is still associated with high mortality even in developed countries. In certain US states more than 50% of the TBM patients eventually die or have neurological complications despite having advanced healthcare settings. This population-based analysis aimed to determine the risk factors and trends associated with TBM morbidity and mortality using state-wide surveillance data.

Results. Among 10,103 TB patients reported from Texas between 2010 and 2017, 192 (1.9%) had TBM. Over the 8-year period, TB proportion fluctuated between 1.5% and 2.7% with peaks in 2011 (2.7%) and 2016 (2.1%) and an overall trend x = −1.32, P = 0.19. TBM had higher mortality at diagnosis (8.9%), during treatment (20.3%) and overall (22.9%) than non-TBM (1.9%, 6.8%, and 7.2%, respectively, P < 0.001). While the mortality during treatment was unchanged overtime in non-TBM patients (z=0.5, P = 0.62), it has consistently increased in TBM patients since 2013 (z=3.09, P = 0.002). TBM patients had more than 7 times the odds for overall death in multivariate analysis [OR 7.25 (95% CI 4.64, 11.33), P < 0.001]. TBM patients were younger, more likely to present with miliary TB or HIV(+). Age ≥45 years, resident of a long-term care facility, IDU, diabetes, chronic kidney disease, abnormal chest radiograph, positive AFB smear or culture, culture not converted from positive to negative, and HIV(+) were independently associated with a higher mortality.

Conclusion. TB remains a challenge in Texas with significantly higher mortality. Risk factors determined by multivariate modeling will inform health professionals and lay a foundation for the development of more effective strategies for TB prevention and management.

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