the mean temperature was 36.9°C prior to initiation of CRRT, 36.6°C while on CRRT, and 37.0°C following discontinuation of CRRT. During each of the periods before, during, and after CRRT, patients who received antibiotics had significantly higher temperatures than those who did not (P < 0.001). Patients receiving antibiotics were generally younger (mean 60 years vs. 64 years, P < 0.001), had longer ICU stays (mean 29 days vs. 12 days, P < 0.001) and spent more time being ventilated (mean 23 days vs. 7 days, P < 0.001). The mean SOFA score on day one was similar (mean 11.1 in the antibiotic group and 10.5 in the other group).

Conclusion. This investigation suggests that patients have slightly lower temperatures while on CRRT, by an average less than half a degree. A similar effect is seen in both patients with infections as well as those without. Further work will be needed to determine what constitutes a true febrile response in this population.

Disclosures. All authors: No reported disclosures.

1341. Development of a Series of High-Throughput Screens to Identify Leads for Nontuberculous Mycobacteria Drug Design
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Session: 153. Mycobacteria
Friday, October 4, 2019: 12:15-12:30 PM

Background. Nontuberculous mycobacteria (NTM), particularly Mycobacterium avium complex and Mycobacterium abscessus complex, cause significant morbidity and mortality in patients with impaired host immunity or pre-existing structural lung conditions. NTM infections are increasing at an alarming rate worldwide and there is a dearth of progress in regard to the development of efficacious and tolerable drugs to treat such infections. Traditional drug discovery screens do not account for the diverse physiological conditions, microenvironments, and compartments that the bacilli encounter during human infection. In order to help populate the NTM drug pipeline, and explore the disconnect between in vitro activity, in vivo activity; and clinical outcomes, we are developing a high throughput in vitro assay platform that will more closely model the unique infection-related conditions encountered by NTM.

Methods. We are developing and validating a suite of in vitro assays that screen compounds for activity against extracellular planktonic bacteria, extracellular bacteria within biofilms, intracellular bacteria, and nutrient-starved non-replicating bacteria.

Results. In a comprehensive hit identification screen for scaffolds to use as starting points for NTM drug development, focused libraries of compounds that have undergone significant preclinical profiling and/or compounds with known activity against M. tuberculosis (TB) were screened. Such 'pickyback' approach taps advances made in TB drug development and leverages them for NTM drug discovery. This will help expedite novel drug development, reduce attrition rate, and offer a shorter route to clinical use as it exploits the prior investment in medicinal chemistry, pharmacology, and toxicology.

Disclosures. All authors: No reported disclosures.

1342. Impact of HIV Infection on Treatment Outcome of New Tuberculosis Patients Attending Tuberculosis and Antiretroviral Treatment Services in the Community-Based Hospital, Thailand: A Retrospective Cohort Study
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Session: 153. Mycobacteria
Friday, October 4, 2019: 12:15-12:30 PM

Background. Tuberculosis (TB) and HIV are one of the significant public health problems in Thailand, and an estimated 15,000 individuals have a dual infection. Both TB and HIV each disease speeds up the progression of each other. TB is the leading cause of death in HIV-infected individuals, and HIV coinfection TB patients have disease-specific, and treatment affected their treatment outcomes. There is insufficient evidence on issues of TB and HIV coinfection. This study aimed to assess the impact of HIV status on treatment outcome of TB patients.

Methods. We conducted a retrospective cohort study among TB patients who registered to service at Chaophraya Abhaibhubha Hospital, Prachin Buri, Thailand from October 1, 2017 to October 31, 2018. All patients demographic data, diagnosis, and treatment were retrieved. Clinical characteristics, treatment outcome, and factors associated with treatment outcome were analyzed.

Results. There were 49 (10.65%) HIV among 460 TB patients with a median (IQR) age of 44 (32–61) years old and 65.2% were males. Disseminated TB and extrapulmonary TB were higher in HIV coinfected group (P < 0.001). All pulmonary TB patients’ lower lobe involvement was higher in HIV coinfected group (62.50 vs. 36.00, P = 0.001). In HIV coinfected group median CD4 was 134 cell/mm3 (IQR 66–268), 66.67% were diagnosed HIV infection after TB diagnosis, the median CD4s and M. avium. We have validated high throughput assays to pharmaceutical standards for replicating and non-replicating M. abscessus. We have also tested a panel of 18 known anti-mycobacterial compounds. assay development is currently underway to test compounds for activity against NTM in biofilm and inside macrophages as well.

Conclusion. To enhance hit identification for scaffolds to use as starting points for NTM drug development, focused libraries of compounds that have undergone significant preclinical profiling and/or compounds with known activity against M. tuberculosis (TB) will be screened. Such a ‘pickyback’ approach taps advances made in TB drug development and leverages them for NTM drug discovery. This will help expedite novel drug development, reduce attrition rate, and offer a shorter route to clinical use as it exploits the prior investment in medicinal chemistry, pharmacology, and toxicology.

Disclosures. All authors: No reported disclosures.
reactions were having HIV infection (OR 7.98; 95% CI 3.73–17.10, P < 0.001), Age >60 years (OR 2.64; 95% CI 1.43–4.87, P = 0.002) and female sex (OR 1.97; 95% CI 1.11–3.52, P = 0.02).

Conclusion. There is a high TB treatment success rate among patients who have treated for TB, but adverse drug events in HIV co-infected TB patients is higher than that observed in non-HIV-infected patients.

Table 1 Clinical characteristics, investigations, and clinical outcomes between tuberculosis patients who with and without HIV coinfection

| Factor | Total (n=418) | HIV+ (n=83) | HIV- (n=335) | P-value |
|--------|--------------|-------------|--------------|--------|
| Clinical Characteristics | | | | |
| Median (IQR) age at time of TB diagnosis, years | 41 (35-61) | 37 (27-49) | 46 (32-62) | <0.001 |
| Gender | | | | |
| Male (%) | 60 (61.6) | 34 (41.0) | 26 (79.2) | 0.189 |
| Female (%) | 150 (14.6) | 13 (15.7) | 137 (41.0) | |
| Median (IQR) body weight at time of TB diagnosis, kilogram | 63 (60-68) | 53 (40-60) | 53 (40-68) | 0.734 |
| Unemployment (%) | 69 (15.0) | 5 (2.4) | 64 (19.2) | 0.081 |
| Total drug resistance (%) | 449 (99.6) | 48 (97.9) | 401 (98.6) | 0.895 |
| Median (IQR) CD4 cell count at TB diagnosis, cells/μL | 234 (204-274) | | | |
| Median (IQR) CD4 cell count at diagnosis, % | 6.97 | | | |

1. Tuberculosis Diagnosis

- Type of tuberculosis, %
  - Pulmonary tuberculosis: 15 (36.1)
  - Lymphatic tuberculosis: 9 (21.1)
  - Miliary tuberculosis: 2 (4.5)
  - Extrapulmonary tuberculosis: 1 (2.3)

- Chest radiography, %
  - Positive: 30 (70.0)
  - Negative: 12 (24.9)

- Lower lobe: 2 (4.5)
- Both upper lobe and lower lobe: 22 (46.8)

- Mycobacteriological confirmed (API/OS), %
  - Treatment and outcome: 2 (4.5)

- Treatment regimen, %
  - NH/Rifampin/ethambutol/Pyrazinamide: 47 (99.3)

- Median (IQR) time to ART initiation, days
  - Not available: 2 (1-18)

Table 2 Factors associated with TB treatment success by univariate logistic regression

| Factors | Odds ratio | 95% confidence interval | P-value |
|---------|------------|-------------------------|--------|
| Age, per 5 year | 0.97 | 0.88-1.07 | 0.592 |
| Female | 1.99 | 0.84-4.70 | 0.118 |
| Underlying Diabetes mellitus | 0.19 | 0.17-0.89 | 0.025 |
| Having HIV coinfection | 0.62 | 0.23-1.68 | 0.349 |
| CD4 cell count <0 cells/mm3 at TB diagnosis | 0.35 | 0.10-1.28 | 0.113 |
| Pulmonary tuberculosis | 0.35 | 0.08-1.51 | 0.161 |
| Extrapulmonary tuberculosis | 2.83 | 0.66-12.13 | 0.161 |
| Negative for microbiological study at diagnosis | 5.58 | 2.25-13.84 | <0.001 |
| TB involving lower lobe | 0.39 | 0.18-0.84 | 0.015 |
| Having side effect from anti tuberculosis drug | 1.34 | 0.40-4.96 | 0.590 |

1. AFB: Acid fast bacilli; ART: antiretroviral therapy; IQR: interquartile range; TB: Tuberculosis

Table 3 Factors associated with TB treatment success by multiple stepwise logistic regression

| Factors | Odds ratio | 95% confidence interval | P-value |
|---------|------------|-------------------------|--------|
| Negative for microbiological study at diagnosis | 4.966 | 1.85-13.35 | 0.001 |
| TB involving lower lobe | 0.36 | 0.17-0.79 | 0.011 |

Table 4 Factors associated with Anti-tuberculosis drug adverse reactions by univariate logistic regression

| Factors | Odds ratio | 95% confidence interval | P-value |
|---------|------------|-------------------------|--------|
| Age >60 year | 1.68 | 0.99-2.85 | 0.052 |
| Female | 1.68 | 1.02-2.80 | 0.043 |
| Underlying Diabetes mellitus | 1.633 | 0.87-3.05 | 0.124 |
| Having HIV coinfection | 5.75 | 3.04-10.85 | <0.001 |
| CD4 cell count <0 cells/mm3 at TB diagnosis | 2.296 | 1.02-7.71 | 0.047 |
| Pulmonary tuberculosis | 1.55 | 0.71-3.39 | 0.273 |
| Negative for microbiological study at diagnosis | 0.856 | 0.52-1.43 | 0.574 |
| TB involving lower lobe | 1.94 | 1.14-3.33 | 0.015 |
| Body weight, per 5 kilograms increasing | 0.92 | 0.81-1.06 | 0.189 |

1. AFB: antituberculosis therapy

Table 5 Factors associated with Anti-tuberculosis drug adverse reaction by multiple stepwise logistic regression

| Factors | Odds ratio | 95% confidence interval | P-value |
|---------|------------|-------------------------|--------|
| Age >60 year | 2.64 | 1.43-4.87 | 0.002 |
| Female | 1.97 | 1.13-3.52 | 0.002 |
| Having HIV coinfection | 7.99 | 3.75-17.10 | <0.001 |

Disclosures. All authors: No reported disclosures.

1343. Infectious Diseases Consultation Avoided Delayed Therapy and Unnecessary Exposures in the Majority of GeneXpert® MTB/RIF and AFB Smear Negative Pulmonary Tuberculosis Cases in the US County Hospital in Houston, Texas

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Session: 153. Mycobacteria Friday, October 4, 2019: 12:15 PM

Background. In 2017, Harris County had a total of 281 cases of newly diagnosed tuberculosis (Mtb), which was the highest incidence in Texas, United States. Lyndon B. Johnson (LBJ) hospital is one of the two HarrisHealth county hospitals which serve a wide population including immigrants and an indigent population. GeneXpert® MTB/RIF (GeneXpert) was implemented in our hospital since 4/2016. However, pulmonary Mtb cases with negative GeneXpert/AFB smear carry significant challenges in the initiation of therapy and hospital infection control. Our aim was to describe how Infectious diseases (ID) consultations helped to identify the cases of both GeneXpert and AFB smear-negative pulmonary Mtb cases without delaying therapy and unnecessary exposures.

Methods. The patients with newly diagnosed pulmonary Mtb in LBJ hospital were identified between January 2017 and December 2018. The patient’s characteristics, GeneXpert results, AFB smear results, and the presence of ID consultation were retrospectively collected. Delayed therapy is defined as the initiation of active four-drug Mtb therapy until the positive culture results.

Results. A total of 52 cases with newly diagnosed Mtb confirmed by positive culture were identified, of which 44 cases who had GeneXpert on at least one sputum specimen were included in the final analysis. 7 out of 44 (20%) had negative GeneXpert on the first specimen and all three or more AFB smears were properly performed. The patient had newly diagnosed AIDS (CD4 of 2 cells/μL) and 3 weeks of chronic cough with normal lung parenchyma and minimal right pleural effusion on CT chest at his presentation.

Conclusion. We had 7 cases (20%) of GeneXpert and AFB smear-negative pulmonary Mtb. ID consultation properly identified 6 cases without delayed therapy. Early involvement of ID should be considered when pulmonary Mtb is suspected.

Disclosures. All authors: No reported disclosures.

1344. Interferon Gamma Release Assay (IGRA) Responses in HIV-Infected and -Uninfected Women in Pregnancy

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