According to the IDSA/ATS criteria. LTR who meet microbiological, but not clinical, criteria were considered colonized and not included for analysis. Azithromycin use was defined as ≥290 days for BOS treatment.

Results. Among 538 LTR, 60% (321/538) were male and 81% (434/538) received double LTs. Indication for LT was idiopathic pulmonary fibrosis (28% [152/538]), chronic obstructive pulmonary disease (23% [121/538]), cystic fibrosis (CF) (13% [68/538]), and other (37% [201/538]). The overall incidence of NTM infection was 4.3% (23/538); of which 65.2% (15/23), 17.4% (4/23), and 17.4% (4/23) were due to MAC, M. abscessus and mycobacterium infections, respectively. Thirty-one percent (165/538) of LTR received azithromycin. LTR who received azithromycin prophylaxis had 0.21 times the odds of developing NTM infections compared with LTR who did not receive azithromycin prophylaxis (OR: 0.21, 95% CI: 0.02 – 0.86, P = 0.02). Age (P = 0.88), type of LT (P = 0.81), pretransplant NTM colonization (P = 0.46), and CF (P = 0.22) were evaluated as possible risk factors, but were not associated with increased risk of developing NTM infections in bivariant analyses. In a multivariable logistic regression model, azithromycin prophylaxis was independently associated with decreased risk of NTM infections after adjusting for CF and pretransplant NTM colonization (aOR: 0.20, 95% CI: 0.05 – 0.88, P = 0.01).

Conclusion. Azithromycin use was associated with lower risk of NTM infections due to M. abscessus and MAC in LTR.

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805. Amikacin Liposome Inhalation Suspension (ALIS) Add-on Therapy for Refractory Mycobacterium avium Complex (MAC) Lung Disease: Effect of In Vivo Azithromycin Susceptibility on Sputum Culture Conversion
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Background. MAC lung disease receiving ALIS plus guideline-based therapy (GBT) vs. GBT alone achieved sputum culture conversion by month 6 (8.9% vs. 8.9%, P < 0.0001). Amikacin treatment failure has previously been reported in patients with amikacin minimum inhibitory concentrations (MIC) >64 µg/mL. We analyzed the impact of amikacin MIC on culture conversion during treatment with add-on ALIS.

Methods. In CONVERT, patients were randomly assigned (2:1) to receive once daily intravenous (IV) or inhaled amikacin liposome inhalation suspension (ALIS) and GBT or GBT alone. Baseline and month 6 (≥3 months of therapy) MICs were determined by broth microdilution. The primary endpoint was MAC sputum culture conversion. Exploratory endpoints included culture conversion by month 3, baseline and month 6 micromolecules, and treatment failure (sputum culture conversion < 99%).

Results. Of the 188 patients randomized to receive ALIS+GBT, 75% (141/188) had MAC lung disease. Of these, 58% (83/141) had persistent amikacin MIC > 64 µg/mL at baseline and 67% (13/19) had persistent amikacin MIC > 64 µg/mL at month 6. Culture conversion rates were 32% (22/69) in the ALIS+GBT arm at baseline and 38% (3/8) post-baseline after adding ALIS. The overall incidence of MAC lung disease receiving ALIS plus guideline-based therapy (GBT) vs. GBT alone achieved sputum culture conversion by month 6 (8.9% vs. 8.9%, P < 0.0001). Amikacin treatment failure has previously been reported in patients with amikacin minimum inhibitory concentrations (MIC) >64 µg/mL. We analyzed the impact of amikacin MIC on culture conversion during treatment with add-on ALIS.

Methods. In CONVERT, patients were randomly assigned (2:1) to receive once daily ALIS+GBT (n = 224) or GBT alone (n = 112). Patients with amikacin-resistant MAC isolates (MICs >64 µg/mL by broth microdilution) were excluded prior to randomization. The primary endpoint was culture conversion, defined as ≥3 consecutive monthly MAC-negative sputum cultures by month 6. Amikacin MICs were correlated with culture conversion rates.

Results. Amikacin MIC distributions at baseline (day 1) were similar in both groups (Figure 1). Conversion rates in the ALIS+GBT arm were 28.6–34.5% for MAC with amikacin MICs of 8–64 µg/mL (Figure 2). Overall, 28 patients developed post-screening amikacin MIC >64 µg/mL, 1/112 in the GBT alone arm (post-baseline), and 24/224 in the ALIS+GBT arm (1 at baseline and 23 post-baseline after adding ALIS). Of these (18/24) had MAC isolates with persistent amikacin MIC >64 µg/mL. Only 1/24 patients in the ALIS+GBT arm with amikacin MIC >64 µg/mL achieved culture conversion. No patient with both macrolide resistance and persistent amikacin MIC >64 µg/mL (8/24) converted.

Conclusion. In the ALIS+GBT arm of CONVERT, culture conversion rates were similar for amikacin MICs ranging from 8–64 µg/mL at baseline. Amikacin MIC >64 µg/mL emerged in 10.3% of patients after initiation of add-on ALIS treatment, and 3.6% in the GBT alone arm. Emergent amikacin MIC >64 µg/mL was associated with failure to convert, particularly with concurrent macrolide resistance. Determining amikacin susceptibility at both treatment initiation and during treatment may have utility for guiding treatment decisions.
806. 2013–2015 Nationwide Tuberculosis Contact Investigation in Childcare Centers and Schools in Korea

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Background. The Republic of Korea has the highest incidence rate of tuberculosis (TB) among members of the OECD, reported as 78.8/100,000 population in 2016. In response, a state-run intensive contact investigation for TB is being conducted. More effective TB control requires an epidemiologic emphasis on the diagnosis and treatment of latent TB infections in children and adolescents, compared with other age groups. Here we present an analysis of data from the childcare center and school contact investigations by the Korea Centers for Disease Control and Prevention (CDC) in 2013–2015.

Methods. Data collected from index patients included age, sex, occupation, disease status, results of AFB smear/culture, and chest X-ray. Data collected from contacts included age, sex, results of serial tuberculin skin test (TST), and chest X-ray. Congregate settings included childcare centers, kindergartens, elementary and secondary schools, and age groups were stratified as follows: 0–4 years, 5–12 years, and 13–18 years. TSTs were considered positive if induration ≥10 mm on the first test (TST1) or demonstrated an increase ≥6 mm over the induration of TST1 on repeat testing after 4 weeks (TST2).

Results. Of the 197,801 subjects with data collected, 173,998 were eligible and included in our analysis. TST1 results were available for 159,346 (91.1%) and when results were positive, induration was 10–14 mm in 7.6% and ≥15 mm in 1.5%. TST2 results were available for 114,797 (82.7%) of the 138,904 with negative TST1, and conversion rate was 9.0%. Altogether considering TST1 and TST2, 17.3% contacts had latent TB infections. Positive rates of TST significantly decreased with age: 20.3% in 0–4 years, 18.8% in 5–12 years, 17.1% in 13–18 years.

TSTs were considered positive if induration ≥10 mm on the first test (TST1) or demonstrated an increase ≥6 mm over the induration of TST1 on repeat testing after 4 weeks (TST2).

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808. Perinatal Depression Among HIV- and TB-Infected and Uninfected Women in an Urban Slum in India: Prevalence and Associated Birth Outcomes

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Background. In low- and middle-income countries, depression during pregnancy is three times more common than in the United States and is more common than postpartum depression. There have been few studies on the prevalence of antepartum and postpartum depression among HIV-infected and uninfected pregnant women in an urban slum in India, and to evaluate associated pregnancy and birth outcomes.

Methods. This study was a longitudinal cohort study of HIV-infected and HIV-uninfected pregnant women at Salkaon General Hospital in Pune, India. Enrolled women answer questions about sociodemographic and medical history, including obstetric history. The PHQ-9 depression scale is administered during pregnancy and at 6 months postpartum.

Results. Of the 189 pregnant women enrolled, 113 (60%) exhibited at least one symptom of depression on the PHQ-9 scale with 23 (12%) women having moderate or severe depression. However, significantly fewer postpartum women had evidence of depression (60% antepartum vs. 26% postpartum, P < 0.001). Of the 77 women who had a postpartum visit, 20 (26%) had symptoms of depression prior to delivery, but only 2 (10%) had more severe depression scores while 18 (90%) had improved

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