Conclusion. The analysis showed that a high loss to follow-up rate was observed in the patient groups from North America, Europe and Central Asia, and Latin America & the Caribbean. LTBI patients from North America had a significantly higher loss to follow-up rate than those from Middle East and North Africa, South Asia, and Sub-Saharan Africa, respectively. Further research is needed to determine how to intervene in the poorly adherent patient population, such as LTBI patients from North America, Europe and Central Asia, and Latin America & the Caribbean.

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1394. Autochthonous Leprosy in Missouri
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Session: P-80. Tuberculosis and other Mycobacterial Infections

Background. Introduction: Leprosy (Hansen's disease) is a chronic granulomatous infection of the skin/peripheral nerves caused by Mycobacterium leprae. Of 216 new cases reported in the US in 2019, 70% were in FL, LA, TX, HI, CA, GA and NY. Leprosy is considered a zoonosis in the southern US with the nine-banded armadillo as a reservoir. There have been no reported autochthonous leprosy cases in Missouri.

Methods. Case: 55 y/o previously healthy male noted a new rash on his arm 2 years ago. Over time it spread to his extremities/torso. Skin biopsy showed a granulomatous infiltrate, suspected granuloma annulare, but it progressed despite appropriate therapy. He noted progressive numbness of the affected areas of skin and several regional nerve distributions. In the weeks prior to his initial visit he noted facial swelling, eyelid and ear induration, worsening fatigue, diffuse arthralgia, and some vision changes. His travel history is limited to Canada, Colorado and a brief vacation to the Texas/Mexico border (no notable outdoor exposure during the latter trip; no travel outside the country). He lives in rural Missouri where he is exposed to armadillos. His dogs frequently kill them and often bring them into the yard, rolling around on/in the dead carcasses which he disposes of. He typically wears gloves when handling them and has never consumed them. On exam he had diffuse purplish-red nummular infiltrated anesthetic papules and plaques diffusely distributed over the trunk and extremities. Distinct left ulnar neuropathy was noted. He exhibited leonine facies and infiltration of the bilateral helices. Repeat biopsy showed a granulomatous infiltrate with abundant acid-fast bacilli. DNA sequencing confirmed M. leprae. He was preventatively treated with prednisone and methotrexate to minimize immune reaction, and two weeks later began a regimen of monthly rifampin, minocycline, and moxifloxacin with an anticipated duration of 24 months.
Results. N/A

Dyspnea. Iatrogenic dyspnea in patients with COPD exacerbations is a known complication. This is potentially the first case of autochthonous dyspnea in Missouri. Providers should include Hansen’s disease in the differential diagnosis of patients with dermal eruption and cutaneous neurological symptoms to avoid delays in diagnosis/care.

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1395. Epidemiology of Non-Tuberculous Mycobacteria Infection Among Immunocompromised Children: A Single Center Experience

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Session: P-80. Tuberculosis and other Mycobacterial Infections

Background. Non-tuberculous mycobacteria (NTM) infection is associated with high rates of morbidity and mortality among immunocompromised adults. However, sparse data exists regarding clinical outcomes among immunocompromised (IC) children with NTM infection. We sought to characterize clinical features and outcomes among IC children at our institution with microbiologically confirmed NTM disease.

Methods. Retrospective review of cases of microbiologically confirmed NTM infection among IC children between January 2017 and December 2020. Children <21yo with microbiologically confirmed NTM disease and known primary or secondary immunodeficiency diagnosed between January 1, 2017 and December 20, 2020 were included in the study. All subjects with a positive NTM microbiologic stain or culture but no subsequent treatment for NTM infection were excluded. Demographic and clinical characteristics were assessed and risk factors for mortality were evaluated.

Results. Of 147 mycobacterial cultures sent during the study period, 72 subjects had a positive microbiologically confirmed NTM species, with 10 subjects meeting all inclusion and no exclusion criteria. Median age was 16 years old, with greater than 50% being male, and 76% having a history of diabetes mellitus. NTM was isolated by bronchial secretions (39%), other respiratory tract (30%), blood cultures positive in 70% of cases, and skin biopsy (13%). Mortality rate was 20.0%.

Conclusion. While rare, NTM infections are associated with significant morbidity and mortality among immunocompromised (IC) children. Additional investigations are needed to assess for risk factors associated with NTM and severe NTM disease.

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1396. The Incremental Hospitalization Burden Associated with Nontuberculous Mycobacterial Lung Disease (NTMLD) Among Patients with Chronic Obstructive Pulmonary Disease (COPD) in Japan

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Session: P-80. Tuberculosis and other Mycobacterial Infections

Background. NTMLD is a life-threatening pulmonary infection that increases inflammation and mortality among COPD patients. Hospital acquired infection was common (60%). 2 year mortality following invasive NTM infection was high at 40%. NTMLD is associated with significant morbidity and mortality among immunocompromised (IC) children. Additional investigations are needed to assess for risk factors associated with NTM and severe NTM disease.

Methods. Retrospective review of cases of microbiologically confirmed NTM infection among IC children between January 2017 and December 2020. Children <21yo with microbiologically confirmed NTM disease and known primary or secondary immunodeficiency diagnosed between January 1, 2017 and December 20, 2020 were included in the study. All subjects with a positive NTM microbiologic stain or culture but no subsequent treatment for NTM infection were excluded. Demographic and clinical characteristics were assessed and risk factors for mortality were evaluated.

Results. Of 147 mycobacterial cultures sent during the study period, 72 subjects had a positive microbiologically confirmed NTM species, with 10 subjects meeting all inclusion and no exclusion criteria. Median age was 16 years old, with 40 percent being female and 50 percent of Hispanic ethnicity. NTM disease was distributed among patients with COPD by comparing their hospitalizations to matched COPD patients (controls). Hospitalizations (all-cause, respiratory-related, and COPD-related) were accrued over a 1-year follow-up period and matched 1:3 to COPD patients without NTMLD (controls). COPD patients with NTMLD were 1.9 times more likely to have an all-cause hospitalization, and 3.0 times more likely to have a COPD-related hospitalization (Fig 1B).

Conclusion. COPD patients with NTMLD had a higher burden of hospitalization than COPD patients without NTMLD. The statistically significantly incremental burden associated with NTMLD in patients with COPD highlights the acute need for appropriate management of NTMLD in Japan.

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1397. Modern Lineages of Mycobacterium tuberculosis Were Recently Introduced in Western India and Demonstrate Increased Transmissibility

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Session: P-80. Tuberculosis and other Mycobacterial Infections

Background. NTM disease was distributed among patients with COPD by comparing their hospitalizations to matched COPD patients (controls). Hospitalizations (all-cause, respiratory-related, and COPD-related) were accrued over a 1-year follow-up period and matched 1:3 to COPD patients without NTMLD (controls). COPD patients with NTMLD were 1.9 times more likely to have an all-cause hospitalization, and 3.0 times more likely to have a COPD-related hospitalization (Fig 1B).

Methods. A retrospective cohort study was conducted using claims data provided by the Japan Medical Data Center (2015-2020). COPD patients with NTMLD were matched 1:3 to COPD patients without NTMLD (controls). Hospitalizations (all-cause, respiratory-related, and COPD-related) were accrued over a 1-year follow-up period after NTMLD diagnosis (index). Incremental burden of NTMLD was assessed by comparing hospitalizations between COPD patients with NTMLD and controls and univariate and multivariate analyses adjusting for comorbidities during 1-year pre-index period.

Results. A total of 492 COPD patients with NTMLD were matched by age and sex to 1476 controls. Mean (SD) age on index date was 56.6 (10.3) years and 61.6% were females. Compared to controls, NTMLD patients had higher prevalence of some pulmonary symptoms and comorbidities such as dyspnea (11% vs 2%), dyspepsia (1.6% vs 0.6%) and lung cancer (7% vs 4%). In univariate analyses, a higher percent of COPD patients with NTMLD had hospitalizations (Fig 1A). the unadjusted annual hospitalization rates were also higher among patients with NTMLD (Fig 2A). Multivariate regressions after adjusting for pre-index comorbidities showed COPD patients with NTMLD were 1.9 times more likely to have an all-cause hospitalization, 2.8 times more likely to have a respiratory hospitalization, and 3.0 times more likely to have a COPD-related hospitalization (Fig 1B).

Conclusion. COPD patients with NTMLD had a higher burden of hospitalization than COPD patients without NTMLD. The statistically significantly incremental burden associated with NTMLD in patients with COPD highlights the acute need for appropriate management of NTMLD in Japan.