Session: 249. Non-Tuberculous Mycobacteria - Epidemiology and Management
Saturday, October 7, 2017, 12:30 PM

Background. Mycobacterium gordonae (M. gordonae) is one of the slow growing mycobacteria, often considered a contaminant and rarely pathogenic. It is often associated with pseudo-outbreaks or infections, usually from a water source; however pulmonary, skin and soft tissue and disseminated infections have been reported in both immunocompetent and immunocompromised hosts. We describe a cohort of patients in Oregon who isolated M. gordonae from >1 pulmonary specimen.

Methods. Oregon residents with M. gordonae isolation were identified from all NTM isolates collected 2005–2012 for statewide laboratory surveillance by the Oregon Health Authority. Clinical data was reviewed for the subset with mycobacterial cultures 2005–2006. We performed descriptive analyses, compared categorical variables in univariate fashion by the χ² test. Student’s t-test or Wilcoxon rank-sum test (WRS) was used to evaluate continuous variables.

Results. 457 patients isolated M. gordonae >1 time between 2007 and 2012 in Oregon. 88 (19.3%) of those also isolated another NTM species and half (N = 46) met ATS/IDSA case definition for NTM disease. 237 (51.9%) patients had >2 M. gordonae isolates. Only 19 of 457 (4.2%) of those that isolated M. gordonae did so before isolating another species of NTM; 6 (31.6%) subsequently met NTM disease criteria. Median time from first M. gordonae isolation to the first isolation of another NTM species was 56 days (range 1–1146 days). Median number of M. gordonae positive specimens was 1 (range 1–6). There was no statistically significant difference in gender or age in those who isolated another NTM species or had NTM disease with M. gordonae isolation. Higher number of positive M. gordonae isolates were associated with isolation of another NTM species (WRS P < 0.01) but not with NTM cases (WRS P = 0.09).

Between 2005 and 2006, 33 patients isolated M. gordonae; 4 had >2 M. gordonae positive isolates and 3 met criteria for NTM disease. Median age was 66 years (range 27–88); 27.3% female and 27 (81.8%) had radiographic findings consistent with pulmonary NTM.

Conclusion. Approximately 20% of our cohort of patients with pulmonary M. gordonae isolates, also isolated a pathogenic NTM species. Further research is needed to evaluate the outcomes of those with NTM disease and M. gordonae isolation.

Disclosures. All authors: No reported disclosures.

2271. Clofazimine for Rapidly Growing Mycobacterial Infections
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Background. Rapidly growing mycobacteria (RGM) have high rates of antibiotic resistance and require prolonged therapy with considerable toxicity. Less toxic and more effective therapies are needed. One promising agent is clofazimine (CFZ), an antibiotic with favorable in vitro data but limited clinical data in RGM.

Methods. We performed a retrospective cohort study to assess outcomes of adult patients treated with CFZ for RGM infection. Primary outcome was cure, defined as no evidence of clinical, radiographic, or microbiologic recurrence within 1 year of follow-up after stopping treatment. If a patient was retreated for infection, only the index treatment was included in the analysis.

Results. We treated 55 adults for RGM infection with CFZ in combination with a median of 5 other antibiotic classes over the entire course of treatment. Of these patients, 58% had pulmonary infection (81% nodular-bronchiectatic and 19% cavitory); 100% of pulmonary infections were M. abscessus. Non-pulmonary disease sites included skin (65%), bone (13%), intra-abdominal (9%), and other (13%); 48% were M. abscessus, 39% were M. chelonae, and 13% were M. fortuitum.

Patients with pulmonary infection were treated for a median duration of 11.9 months and non-pulmonary for a median of 7.9 months. CFZ was well tolerated. There were 2 (4%) cases of hepatitis and 3 (5%) cases of QT prolongation. For patients who completed treatment for pulmonary infections (n = 27), 67% achieved symptomatic improvement, 65% achieved radiographic improvement, and 71% achieved negative cultures. For patients who completed treatment for non-pulmonary infection (n = 22), 100% achieved clinical improvement.
For patients who had at least 1 year of follow up after stopping antibiotics (pulmonary n = 21, non-pulmonary n = 14), 43% of patients with pulmonary infections achieved clinical cure and 79% of patients with non-pulmonary infections achieved clinical cure. Within 1 year of follow up 19% of pulmonary infection patients and none of the non-pulmonary patients had died.

Conclusion. As a part of multidrug therapy, CFZ is useful in the in the treatment of drug-resistant RGM infections, particularly skin infections, and offers a better tolerated option compared with other available antibiotics.

Disclosures. All authors: No reported disclosures.

2272. Healthcare Resource Utilization and Costs Following Diagnosis of Nontuberculous Mycobacterial Lung Disease in the USA

Beata Casanas, DO
Jellyana Peraza,

Abstract: From 2010-2015, 178 new cases of leprosy were reported in 2015 with Florida being one of six states and contributing a large number (73%) of registered cases. It was also the only state showing an increasing occurrence compared with the previous years. Studies from other southern U.S. states in armadillos and leprosy patients demonstrate infection with the same strain of Mycobacterium leprae, confirming human armadillo exposure as the main risk factor for leprosy. In contrast, cases from Florida show no clear risk factor. We present three cases of leprosy from Hillsborough county (Florida), with no previous armadillo exposure but a different risk factor in common: being nurse but denied leprosy or armadillo exposure. A biopsy confirmed borderline lepromatous leprosy.

Disclosures. All authors: No reported disclosures.

2274. Rate of All-cause Hospitalization at Year 2 Between Treatment Groups Following Diagnosis of Nontuberculous Mycobacterial Lung Disease in the USA

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Abstract: From 2010-2015, 178 new cases of leprosy were reported in 2015 with Florida being one of six states and contributing a large number (73%) of registered cases. It was also the only state showing an increasing occurrence compared with the previous years. Studies from other southern U.S. states in armadillos and leprosy patients demonstrate infection with the same strain of Mycobacterium leprae, confirming human armadillo exposure as the main risk factor for leprosy. In contrast, cases from Florida show no clear risk factor. We present three cases of leprosy from Hillsborough county (Florida), with no previous armadillo exposure but a different risk factor in common: being nurse but denied leprosy or armadillo exposure. A biopsy confirmed borderline lepromatous leprosy.

Disclosures. Our case series demonstrates that a history of armadillo exposure is not always present. Other risk factors need to be considered when leprosy is a possible diagnosis in a patient. Place of birth is a very important factor due to the diverse and increasing foreign-born population in the United States.

Disclosures. All authors: No reported disclosures.

2275. Reduction in Nontuberculous Mycobacteria at a Tuberculosis Hospital Following a Quality Assurance Intervention

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Abstract: From 2010-2015, 178 new cases of leprosy were reported in 2015 with Florida being one of six states and contributing a large number (73%) of registered cases. It was also the only state showing an increasing occurrence compared with the previous years. Studies from other southern U.S. states in armadillos and leprosy patients demonstrate infection with the same strain of Mycobacterium leprae, confirming human armadillo exposure as the main risk factor for leprosy. In contrast, cases from Florida show no clear risk factor. We present three cases of leprosy from Hillsborough county (Florida), with no previous armadillo exposure but a different risk factor in common: being nurse but denied leprosy or armadillo exposure. A biopsy confirmed borderline lepromatous leprosy.

Disclosures. All authors: No reported disclosures.

2277. Major Risk Factors for Leprosy in a Nonendemic Area of the USA

Jellyana Peraza,

Abstract: From 2010-2015, 178 new cases of leprosy were reported in 2015 with Florida being one of six states and contributing a large number (73%) of registered cases. It was also the only state showing an increasing occurrence compared with the previous years. Studies from other southern U.S. states in armadillos and leprosy patients demonstrate infection with the same strain of Mycobacterium leprae, confirming human armadillo exposure as the main risk factor for leprosy. In contrast, cases from Florida show no clear risk factor. We present three cases of leprosy from Hillsborough county (Florida), with no previous armadillo exposure but a different risk factor in common: being nurse but denied leprosy or armadillo exposure. A biopsy confirmed borderline lepromatous leprosy.

Disclosures. All authors: No reported disclosures.

2278. Healthcare Resource Utilization and Costs Following Diagnosis of Nontuberculous Mycobacterial Lung Disease in the USA

Beata Casanas, DO
Jellyana Peraza,

Abstract: From 2010-2015, 178 new cases of leprosy were reported in 2015 with Florida being one of six states and contributing a large number (73%) of registered cases. It was also the only state showing an increasing occurrence compared with the previous years. Studies from other southern U.S. states in armadillos and leprosy patients demonstrate infection with the same strain of Mycobacterium leprae, confirming human armadillo exposure as the main risk factor for leprosy. In contrast, cases from Florida show no clear risk factor. We present three cases of leprosy from Hillsborough county (Florida), with no previous armadillo exposure but a different risk factor in common: being nurse but denied leprosy or armadillo exposure. A biopsy confirmed borderline lepromatous leprosy.

Disclosures. All authors: No reported disclosures.