

1662. The Prevalence of *M. tuberculosis* among Acid Fast Cultures from Military Health System Beneficiaries from Hawaii and Pacific Islands from January 2002 to November 2019

Elena M. Crecelius, MD¹; Michael Lustik, MS²; Timothy Horseman, MS²; Milissa Jones, MD, MPH³; ¹Tripler Army Medical Center, Hawaii, U.S. Army, Kaneohe, Hawaii; ²Tripler Army Medical Center, HONOLULU, Hawaii

Session: P-72. Tuberculosis and other Mycobacterial Infections

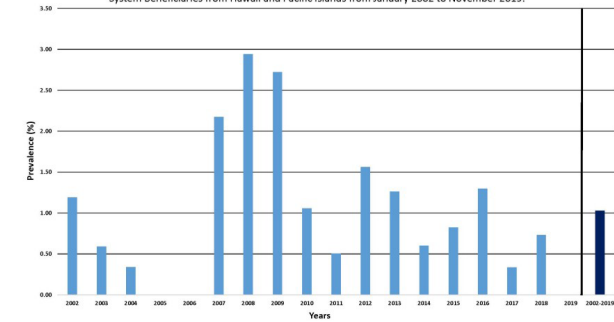
Background. Tuberculosis (TB), caused by *Mycobacterium tuberculosis* (MTB), is the leading infectious cause of death worldwide and the state of Hawaii (HI) has the second highest case rate of TB in the United States. The prevalence of TB among military health system (MHS) beneficiaries (active duty service members, retirees, dependents, civilians and eligible Pacific Island civilians) in HI has not been previously reported. Our analysis evaluates the prevalence of MTB among acid fast cultures (AFCs) tested at Tripler Army Medical Center (TAMC) on Oahu, HI and describes demographic factors associated with positive samples.

Methods. We analyzed AFC results from TAMC clinical diagnostic microbiology laboratory from January 2002 to November 2019. Demographic data were recorded for each individual with an AFC sample during the study period. Prevalence was calculated based on the number of MTB-positive AFCs per all AFCs over the study period. Multivariable logistic regression was used to evaluate associations between demographic factors and MTB-positive AFC results.

Results. From January 2002 to November 2019 there were 4768 AFCs resulted at TAMC with 49 MTB-positive AFC, leading to a cumulative prevalence of 1.03 percent (Figure 1). After controlling for other factors, Asian-Pacific Islanders had nearly 15 times higher odds of having a positive AFC than whites (OR=14.96, 95% CI 5.03, 44.55, p< 0.001) and active duty personnel had 2.6 times the odds of having a positive AFC than dependents, civilians and retirees (OR=2.6, 95% CI 0.94, 7.22, p=0.067).

Figure 1. The Prevalence of *M. tuberculosis* (MTB) among Acid Fast Cultures (AFC) from Military Health System Beneficiaries from Hawaii and Pacific Islands from January 2002 to November 2019.

Figure 1. The Prevalence of *M. tuberculosis* (MTB) among Acid Fast Cultures (AFC) from Military Health System Beneficiaries from Hawaii and Pacific Islands from January 2002 to November 2019.



| Prevalence | 1.19 | 0.59 | 0.34 | 0 | 0 | 2.17 | 2.94 | 2.72 | 1.06 | 0.51 | 1.56 | 1.26 | 0.6 | 0.82 | 1.3 | 0.34 | 0.73 | 0 | 1.03 |
|--------------|------|------|------|-----|-----|------|------|------|------|------|------|------|-----|------|-----|------|------|-----|------|
| MTB-Positive | 1 | 1 | 1 | 0 | 0 | 1 | 6 | 11 | 4 | 2 | 6 | 5 | 2 | 2 | 4 | 1 | 2 | 0 | 49 |
| Total AFC | 84 | 170 | 295 | 280 | 119 | 46 | 204 | 404 | 378 | 396 | 384 | 395 | 334 | 243 | 308 | 298 | 274 | 155 | 4768 |

Conclusion: The low prevalence of MTB among AFCs performed at our institution over nearly 16 years suggests that living in the state of HI does not appear to confer high rates of TB to MHS beneficiaries. Persons with Asian-Pacific Islander ethnicity have higher odds of positive AFC which corroborates prior studies regarding risk factors for MTB. Further analysis is needed to further define risk factors associated with positive AFC among MHS beneficiaries in HI. Follow-up analysis is underway to describe the clinical course of the persons with MTB-positive AFC from this study.

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1663. The Significance of Acid Fast Cultures in Peritoneal Dialysis-associated Infections: A Non-tuberculous Mycobacteria Case Series

Heather Lusby, DO¹; Anthony Cannella, MD, MSc²; ¹University of Florida, Gainesville, Florida; ²University of Florida, NF/GS Veterans Health Administration, Gainesville, FL

Session: P-72. Tuberculosis and other Mycobacterial Infections

Background. Non-tuberculous mycobacteria (NTM) are a group of *Mycobacterium* that are defined as species other than *Mycobacterium tuberculosis* complex and *Mycobacterium leprae*. Rapid growing NTM's grow on culture media as early as 5-7 days. NTM's are considered a rare cause of peritoneal dialysis (PD) associated infections.

Methods. We highlight four cases of PD catheter associated infections due to rapid growing NTMs to convey the importance of these bacteria in the setting of PD associated infections.

Results. All of our cases all were on PD due to their end stage renal disease (ESRD). Case 1 is a 55-year-old man who was on PD due to IgA nephropathy. He had ulceration around catheter site and abdominal pain for 3 months prior to presentation. Catheter site and peritoneal fluid were both positive for *Mycobacterium abscessus*. Case 2 is a 59-year-old woman with who was on PD due to Alport syndrome. She presented with fever and pain around PD catheter site. Cultures were positive for *Mycobacterium fortuitum*. Case 3 is a 68-year-old woman who was on PD due to diabetic nephropathy. She presented after increased drainage around PD-catheter site

after 2 months duration. Cultures from catheter site grew *Mycobacterium porcinum*. Case 4 is a 73-year-old male with who was on PD due to diabetic nephropathy. He presented due to erythema around his PD catheter site. Catheter site cultures were positive for *M. abscessus*. Each case was treated based upon culture data and for varied length of time, which can be further seen in Table 1.

Table 1

| Characteristics and Treatment of Cases | | | | | | |
|--|---------|--|-------------------------|--------------------------------|--|--------------------------------------|
| Case # | Age/Sex | Culture site(s) | Associated peritonitis? | Culture | Treatment | Duration |
| Case 1 | 55 M | -Peritoneal catheter site -Peritoneal fluid | Yes | <i>Mycobacterium abscessus</i> | -Oral azithromycin -Intravenous meropenem -Intravenous tigecycline | 6 months |
| Case 2 | 59 F | -Peritoneal catheter site | No | <i>Mycobacterium fortuitum</i> | -Oral clarithromycin -Oral ciprofloxacin | 8 months |
| Case 3 | 68 F | -Peritoneal catheter site | No | <i>Mycobacterium porcinum</i> | -Oral ciprofloxacin -Oral linezolid -Intravenous amikacin | Passed prior to completing treatment |
| Case 4 | 73 M | -Peritoneal catheter site | Yes | <i>Mycobacterium abscessus</i> | -Intravenous amikacin -Intravenous meropenem -Oral linezolid -Oral azithromycin | 6 months |

Conclusion. Typical organisms that cause peritonitis and PD exit site infections are from skin flora contamination. The International Society of Peritoneal Dialysis recommends anaerobic and aerobic cultures to be obtained in suspected peritonitis. Expected culture negative rate are typically about 10-20%. NTM's can be often missed and diagnosed as a culture negative infection if routine acid-fast bacilli (AFB) cultures are not obtained. Also, NTMs are likely to be under represented since these are not considered reportable. A high index of suspicion would mandate culturing for NTMs as a potential cause of PD catheter associated infection. With having 4 cases all in Florida, we would like to stress the importance of ordering AFB cultures in PD catheter associated infections.

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1664. The Utilization of Hospital Inpatient Care due to Tuberculosis, Republic of Ireland, 2015-2018

James A. O'Connell, MB BCh BAO MSc MRCPI¹; Eoghan de Barra, MB MD²; Samuel McConkey, MB MD³; ¹Department of International Health and Tropical Medicine, Dublin, Dublin, Ireland; ²Royal College of Surgeons in Ireland, Dublin, Dublin, Ireland

Session: P-72. Tuberculosis and other Mycobacterial Infections

Background. The Republic of Ireland (ROI) is a low incidence TB country. The last reform of TB services in the ROI in 2003 recommended that most TB management should be delivered on an outpatient basis with 3 hospitals being designated as TB centres. Our aim was to describe the utilization of hospital inpatient care by patients with TB in the Republic of Ireland.

Methods. Hospital coding data were searched to identify TB hospital discharges between 01/01/2015-31/12/18. The projected cost of TB episodes of care was calculated using payment rules for public hospitals in Ireland.

Results. 1185 admissions with TB as the principal diagnosis were identified. 801/1185 (68%) episodes of care were emergencies and 384/1185 (32%) were elective. We estimate that 65.1% (818/1257) patients with TB notified in the Republic of Ireland from 2015-2018 had an episode of care in a public hospital and (50.8%) 639/818 had an emergency episode of care. We estimate that mean annual cost of TB inpatient care per year in the ROI from 2015-2018 was €2,638,828 - 2,955,047, with emergency episodes of care costing an average of €2,250,926 - 2,557,397 per year.

Conclusion. The burden of TB on hospital inpatient care in the Republic of Ireland is significant.

The national TB policy should change in recognition of this.

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1665. Using Electronic Health Records to Describe TB in Community Health Settings: a Cohort Analysis in a Large Safety-Net Population

Jonathan Todd, PhD, MSPH¹; Jon Puro, MPA/HA²; Matthew Jones, MS¹; Jee Oakley, MPH²; Laura A. Vonnahme, MPH³; Tracy Ayers, PhD⁴; ¹OCHIN, Inc., Portland, Oregon; ²OCHIN, Inc, Portland, OR; ³Centers for Disease Control and Prevention, ATLANTA, Georgia; ⁴CDC, Atlanta, Georgia

Session: P-72. Tuberculosis and other Mycobacterial Infections

Background. Over 80% of tuberculosis (TB) cases in the United States are attributed to reactivation of latent TB infection (LTBI). Eliminating TB in the United States requires expanding identification and treatment of LTBI. Centralized electronic health records (EHRs) are an unexplored data source to identify persons with LTBI. We explored EHR data to evaluate TB and LTBI screening and diagnoses within OCHIN, Inc., a U.S. practice-based research network with a high proportion of Federally Qualified Health Centers.

Methods. From the EHRs of patients who had an encounter at an OCHIN member clinic between January 1, 2012 and December 31, 2016, we extracted demographic variables, TB risk factors, TB screening tests, International Classification of Diseases (ICD) 9 and 10 codes, and treatment regimens. Based on test results, ICD