Table of *M. kansasii* cases

| Age (years) | 1 | 2 | 3 | 4 | 5 |
|-------------|---|---|---|---|---|
| Underlying conditions | SCID, thymopatry, non-tuberculous syphilis | SCID, thymopatry, non-tuberculous syphilis | SCID, thymopatry, non-tuberculous syphilis | SCID, thymopatry, non-tuberculous syphilis | SCID, thymopatry, non-tuberculous syphilis |
| Duration of symptoms | 4 weeks | 6 weeks | 8 weeks | 10 weeks | 12 weeks |

| Medication started | Rifampicin, isoniazid, pyrazinamide, ethambutol (daily) | Rifampicin, isoniazid, pyrazinamide, ethambutol (daily) | Rifampicin, isoniazid, pyrazinamide, ethambutol (daily) | Rifampicin, isoniazid, pyrazinamide, ethambutol (daily) | Rifampicin, isoniazid, pyrazinamide, ethambutol (daily) |

| Duration of treatment | 3 months | 6 months | 9 months | 12 months | 15 months |

| Response | Poor | Moderate | Good | Excellent | Unresolved |

Rapid diagnosis of disseminated *M. kansasii* infection

**Conclusion.** Open-ended NGS plasma testing for mcfDNA identified disseminated *M. kansasii* infection much earlier than standard microbiology and thus helped in initiation and modification of pathogen directed treatment.

**Disclosures.** All Authors: No reported disclosures

464. Increasing Use of Interferon-Gamma Release Assay to Test for Pediatric Tuberculosis in a Low-Burden Setting

**Background.** The American Academy of Pediatrics recommends tuberculin skin tests (TSTs) or interferon gamma release assays (IGRAs) to test for tuberculosis (TB) infection in children ≥2 years old, and prioritizes IGRA testing in Bacille Calmette-Guérin vaccine recipients due to cross-reactivity. TSTs require a return visit, which frequently results in loss to follow up. Growing evidence supports accuracy of IGRA testing in pediatric patients, including young children, leading to calls for preferential use of IGRA over TST. We sought to evaluate trends in IGRA use in children over time.

**Methods.** We identified all TB infection tests conducted in children 5-17 years of age, ≥2 years old, and prioritized IGRA testing in Bacille Calmette-Guérin vaccine recipients. We included IGRAs and TSTs that were performed on children 5-17 years of age at 2 academic medical systems in Boston from October 2015 – January 2021. TSTs were identified using medication administration records, and IGRA tests were identified using medication administration records, from October 2015 – January 2021. IGRAs were identified using medication administration records, from October 2015 – January 2021. We used Pearson correlation to determine the association between the total number of tuberculosis infection tests per month and proportion of tests that were interferon gamma release assays, from October 2015 - January 2021.

**Results.** During fosfomycin DD testing, the frequent occurrence of IC and their increased fosfomycin resistance. **Disclosures.** All Authors: No reported disclosures

647. Investigation of Heteroresistance Among *Klebsiella pneumoniae* (KP) Inner Colonies (IC) Observed During Fosfomycin Disk Diffusion (DD) Testing

**Background.** During fosfomycin DD testing, the frequent occurrence of non-susceptible IC within the zone of inhibition of susceptible isolates has been noted. The Clinical & Laboratory Standards Institute (CLSI) and European Committee on Antimicrobial Susceptibility Testing (EUCAST) have contradicting recommendations on how IC should be interpreted; CLSI recommends considering IC when interpreting DD results whereas EUCAST recommends ignoring them. This study sought to identify the susceptibility of these IC and to understand whether heteroresistance contributes to the appearance of IC during fosfomycin DD.

**Methods.** This study included a convenience sample of 71 KP clinical isolates from 3 United States locations. During DD testing, 58 (81.7%) of these isolates displayed at least one IC. Broth microdilution (BMD) minimal inhibitory concentration (MIC) testing, was performed on a subset (n=32) of the IC in duplicate for comparison to the corresponding parent MIC values. This was followed by a modified disk elution screening test for heteroresistance to compare the frequency of low level resistance (LLR) and high level resistance (HLR) between the susceptible isolates that produced resistant IC and those that did not produce any IC (n=3).

**Results.** The MIC range for the IC isolates (128 to > 1024 μg/mL) increased as the MIC range for the parent isolates (2 to > 256 μg/mL) increased from the one LLR-negative isolate was IC-producing. There were 19 pandemic LLR-negative isolates tested via a modified disk elution test displayed either LLR or HLR regardless of whether heteroresistance contributes to the appearance of IC during fosfomycin DD. 

**Conclusion.** Use of IGRA among patients age 5-17 years of age increased significantly overall and compared to TST in two large Boston healthcare systems over a 5-year period. These results suggest a shift towards blood-based TB infection testing in a low-burden setting, which may improve completion of the pediatric TB infection care cascade. Future research is needed to determine reasons for changing testing modalities, and similar patterns in other settings.

**Disclosures.** Gabriella S. Lamb, MD, MPH, Nothing to disclose

Tuberculosis infection tests and proportion IGRA.

**Total number of tuberculosis infection tests per month and proportion of tests that were interferon gamma release assays, from October 2015 - January 2021.**

**Conclusion.** Use of IGRA among patients age 5-17 years of age increased significantly overall and compared to TST in two large Boston healthcare systems over a 5-year period. These results suggest a shift towards blood-based TB infection testing in a low-burden setting, which may improve completion of the pediatric TB infection care cascade. Future research is needed to determine reasons for changing testing modalities, and similar patterns in other settings.

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**Methods.** This study included a convenience sample of 71 KP clinical isolates from 3 United States locations. During DD testing, 58 (81.7%) of these isolates displayed at least one IC. Broth microdilution (BMD) minimal inhibitory concentration (MIC) testing, was performed on a subset (n=32) of the IC in duplicate for comparison to the corresponding parent MIC values. This was followed by a modified disk elution screening test for heteroresistance to compare the frequency of low level resistance (LLR) and high level resistance (HLR) between the susceptible isolates that produced resistant IC and those that did not produce any IC (n=3).

**Results.** The MIC range for the IC isolates (128 to > 1024 μg/mL) increased as the MIC range for the parent isolates (2 to > 256 μg/mL) increased from the one HLR-negative isolate was IC-producing. There were 19 pandemic LLR-negative isolates tested via a modified disk elution test displayed either LLR or HLR regardless of whether heteroresistance contributes to the appearance of IC during fosfomycin DD. 

**Conclusion.** Use of IGRA among patients age 5-17 years of age increased significantly overall and compared to TST in two large Boston healthcare systems over a 5-year period. These results suggest a shift towards blood-based TB infection testing in a low-burden setting, which may improve completion of the pediatric TB infection care cascade. Future research is needed to determine reasons for changing testing modalities, and similar patterns in other settings.

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