Colistin Susceptibility Testing Using the MicroScan® Colistin Well

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MicroScan® colistin well result was confirmed (defined as an ETEST® MIC > 2) in 27 *A. baumannii* patients in the community, have no difference in predilection for nor site of infection, and are less likely to be resistant to later generation Cephalosporins.

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

**2017. Colistin Susceptibility Testing Using the MicroScan® Colistin Well**

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**Session:** 234. Diagnostics – Bacterial Identification and Resistance

**Background.** Antimicrobial resistance is a threat to public health. As carbapenem-resistant *Enterobacteriaceae*, multidrug-resistant *Pseudomonas aeruginosa*, and multidrug-resistant *Acinetobacter baumannii* have increased in prevalence, there is increased interest in using colistin as a therapeutic option. However, testing for colistin resistance has increased in prevalence, interest in using colistin as a therapeutic option. However, testing for colistin resistance is problematic for most clinical microbiology laboratories. Also, there is a paucity of surveillance data on the prevalence of colistin resistance in the United States. MicroScan® Gram-negative panels include a colistin well (4 μg/mL) to aid in the identification of bacteria, but it is not known whether this well can be used to assess the prevalence of colistin resistance.

**Methods.** All *Escherichia coli*, *Klebsiella pneumoniae*, *K. oxytoca*, *Enterobacter cloacae*, *E. aerogenes*, *P. aeruginosa*, and *A. baumannii* identified at the Emory University clinical microbiology laboratory between January 1, 2016 and December 31, 2016 were included in the study. Routine bacterial identification and antimicrobial susceptibility testing were performed using the MicroScan WalkAway 96 plus® and the Negative Blood Panel. Genes encoding *blaKPC* were identified by TEM-PCR and not by culture. TEM-PCR also identified 2 subjects with *K. kingae* infection; neither was identified by culture. TEM-PCR detection of multiresistant *Klebsiella aerogenes* resistance was 100% concordant with AST in the clinical laboratory. Genes encoding PVL were identified in 8/18 (44%) of *S. aureus* samples. No bacterial co-detections were identified, and no other pathogens were identified by TEM-PCR or culture. Finally, there were no subjects with positive bacterial cultures and negative TEM-PCR results.

**Conclusion.** Rapid diagnostic assays, such as TEM-PCR, may be useful adjuncts to conventional, culture-based testing for children with MSI. Advantages include rapid identification of pathogen and early detection of antibiotic resistance genes. In a single multiplex assay, TEM-PCR provided reliable identification of *S. aureus*, with the potential for informing antibiotic selection early in the disease course.

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

**2019. Molecular characterization and antimicrobial susceptibility of extended-spectrum b-lactamases (ESBL) producing enterobacteriaceae (ESBLE) causing urinary tract infections (UTI)**

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**Session:** 234. Diagnostics – Bacterial Identification and Resistance

**Background.** E. coli and *Klebsiella pneumoniae* (KP) target-enriched multiplex PCR (TEM-PCR) in children with pediatric musculoskeletal infections (MSI)

**Methods.** Target-enriched multiplex PCR (TEM-PCR) in children with pediatric musculoskeletal infections (MSI). Selection criteria were determined as those MSI presenting with associated bone or joint infection, including patients with or without osteomyelitis (JOT). Participants were enrolled across the age range of 1 month to 18 years. The primary outcome measure was detection of TEM-PCR positive cultures with 17/25 (68%) by culture. *S. aureus* was identified in 18/25 (72%) patients, of which 8/18 (44%) were positive by TEM-PCR and not by culture.

**Results.** TEM-PCR was able to detect 21/25 (84%) of *S. aureus* isolates. Multiple co-detections were identified, and no other pathogens were identified by TEM-PCR or culture. Finally, there were no subjects with positive bacterial cultures and negative TEM-PCR results.

**Conclusion.** Rapid diagnostic assays, such as TEM-PCR, may be useful adjuncts to conventional, culture-based testing for children with MSI. They allow for identification of pathogen and early detection of antibiotic resistance genes. In a single multiplex assay, TEM-PCR provided reliable identification of *S. aureus*, with the potential for informing antibiotic selection early in the disease course.

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