2125. Staphylococcus Species Identification by Fourier Transform Infrared (FTIR) Spectroscopic Techniques: A Cross-Lab Study  
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Background. Staphylococcus aureus is well known to be associated with atopic dermatitis. Recent studies also report S. aureus presence in lesional skin of sepsaem cell carcinoma (SCC) and its precursor lesion, actinic keratosis (AK). Therefore, it is of potential clinical interest to monitor skin S. aureus colonization on AK lesions. Fourier transform infrared (FTIR) spectroscopy is a cost-effective, nondestructive, and reagent-free technique for rapid microbial identification. It is based on the use of spectral databases developed with well-characterized strains in conjunction with the application of multivariate statistical analysis to elaborate classification models. In the present cross-lab study, spectral databases containing FTIR spectra of over 1000 staphylococcal isolates obtained from reference and clinical microbiology laboratories across Canada were employed in the FTIR spectroscopic identification of Staphylococcus species isolated from AK, SCC, and perilesional skin of patients at the Princess Alexandra Hospital Dermatology Clinic in Brisbane, Australia.  
Methods. FTIR spectra of 51 staphylococcal isolates from AK, SCC, and perilesional skin were acquired by both attenuated total reflectance (ATR)-FTIR and transfection-FTIR spectroscopy. All isolates had been previously characterized by 16S rRNA sequencing. ATR- and transfection-FTIR spectra were recorded in triplicate from isolated colonies taken from the same agar plate. Identification of the bacteria was based on the similarities of their spectra with those in ATR- and transfection-FTIR spectral databases originating from the Canadian lab.  
Results. Among the 51 staphylococcal isolates included in this study, identification of S. aureus (n = 24) with 100% specificity and 100% sensitivity was achieved by both ATR- and transfection-FTIR spectroscopy. Overall, FTIR-based species identification was in 90.2% concordance with 16S rRNA sequencing.  
Conclusion. This cross-lab study demonstrates the applicability of Canadian isolate-based ATR- and transfection-FTIR spectral databases for the identification of clinical staphylococcal isolates obtained in Australia. The results support the potential utility of FTIR spectroscopic techniques to monitor skin S. aureus colonization on AK lesions.  
Disclosures. All authors: No reported disclosures.

2126. Comparison of Time to Appropriate Antibiotic Between Using Microarray Assay and Mass Spectrometry Technique for Identification of Positive Blood Cultures  
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Background. Microarray-based, multiplexed, automated molecular method is a rapid diagnosis of bloodstream infections by directly identify bacterial pathogens and antibiotic resistance genes from positive blood culture. Previous studies showed significantly reduce time to organism identification from positive blood culture and antibiotic resistance gene with 97.1% sensitivity and 100% specificity. This study aimed to evaluate time to appropriate antibiotic between using Microarray Assay and Mass Spectrometry technique for bacterial identification.  
Methods. one hundred and forty-five patients with bloodstream infection in medical ward were enrolled between 1 June 2018 and 31 January 2019. There were 2 study periods (pre-intervention and post-intervention), using MALDI-TOF combined with the conventional microbiological method as the current standard method in pre-intervention group (N = 70) and microarray technique was used add-on to post-intervention group (N = 75). Antibiotic therapy was adjusted by infectious disease team in both periods of study.  
Results. There were significantly faster bacterial identification and detection of antibiotic resistance (39.34 hours vs. 5 hours, P = 0.0001) as well as time to adjust specific antibiotic therapy (75 hours vs. 27.65 hours, P = 0.0001) resulted in earlier appropriate antibiotic therapy (31 hours vs. 0 hours, P = 0.005) and decrease unnecessary of antibiotic adjustment (51.4% vs. 37.3%). However, all-cause mortality within 2 weeks was not significantly reduced (11.4% vs. 14.7%), no differences cost of antibiotic therapy and length of hospital stay (13 days vs. 17 days).  
Conclusion. Microarray technique has rapid turnaround time to bacterial identification and detection of some resistant genes. A combination of this technique and clinical judgement encourage earlier appropriateness antibiotic therapy and may be helpful in antibiotic stewardship program.

2127. Parental Acceptance of Over-the-Counter (OTC) Testing for Streptococcal Pharyngitis  
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Background. Group A Streptococcus (GAS), is currently diagnosed by throat culture or rapid antigen detection test (RAT) by a healthcare provider (HP), usually, is an outpatient (OP) setting. There is current interest in expanding OTC diagnostics (FDA approved for HIV and hepatitis C) to other infectious diseases such as GAS pharyngitis. There are no data on parental acceptance of such a test. Our aim was to determine parental acceptance of expanding OTC diagnostic availability for GAS pharyngitis testing.  
Methods. Caregivers of 3–18 years old in OP primary care pediatric clinics were given a questionnaire: data included demographics (excluding all patient identifiers), interest in buying an OTC GAS test, education level, type of health insurance (HI), comfort level swabbing their child, interest in available support/free hotline with uncertainty, and support availability may lead to greater comfort level with such testing.  
Results. 90 questionnaires were collected, 14 duplicates excluded. 34 (45%) parents indicated they would buy an OTC GAS test, 35 (46%) would not, 4 (5%) were unsure, 3 (4%) did not respond. There was no correlation between interest in OTC test and age (P = NS), or education level (P = NS). There was a trend of OTC test interest among those with private HI vs. Medicaid (P = 0.067). There was a statistically significant association between interest in buying an OTC GAS test and the following variables: high self-swab comfort level and availability of support (P = 0.009 and 0.001, respectively). The majority of participants [73/76 (96%)] did not respond to questions about acceptable pricing.  
Conclusion. There was mixed interest in OTC GAS testing among respondents. Neither age nor educational level affected interest. Surprisingly, 96% of respondents declined to select a price they would pay for an OTC GAS test. Greater interest in OTC GAS testing among respondents with private HI suggests those parents are more likely to purchase the kits to avoid an HP visit (and co-payment). Since most respondents were comfortable self-swabbing or unsure, further education including web tutorial and support availability may lead to greater comfort level with such testing.  
Disclosures. All authors: No reported disclosures.

2128. Murine Typhus and Pregnancy: Case Series and Literature Review  
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Background. Murine typhus is an arthropod borne disease of worldwide distribution with recent reemergence in the United States of America. There is limited data about the presentation, treatment and outcomes in the pregnant population. We report two cases of murine typhus in pregnancy, as well as a case series based in literature published between 1990 and 2019.  
Methods. A comprehensive search in Pubmed database using words murine typhus, pregnancy, R. typhi and endemic typhus was done. Exclusion criteria were asymptomatic murine typhus in pregnancy and undiagnosed febrile illness in pregnancy.  
Results. Six articles met the criteria of symptomatic pregnant murine typhus infection. Four case reports plus our own 2 case reports, and 2 observational population studies. A total of 35 pregnancy patients were identified. Distribution was worldwide. Gestational age at presentation varied. Patients frequently presented with prolonged duration of fevers prior to presentation, headache, rash, thrombocytopenia and elevated hepatic transaminases. Diagnosis was mainly based on serology. Treatment varied and 8 cases did not receive any treatment at all. Overall pregnancy outcome