**Pulmonary Opportunistic Infections**

|                | History | No History | p-value |
|----------------|---------|------------|---------|
| N              | 10      | 73         |         |
| FEV1/FVC       | 0.761±0.089 | 0.792±0.068 | 0.107   |
| SGRQ           | 41.1±21.2 | 27.2±21.7  | 0.016   |
| DLCO           | 17.5±5.01 | 20.7±5.61  | 0.032   |

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2012. Lysis Centrifugation Method for the Direct Identification of Positive Blood Cultures Using MALDI-TOF MS

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Session: 234. Diagnostics – Bacterial Identification and Resistance

Saturday, October 7, 2017: 12:30 PM

**Background.** Matrix-assisted laser desorption ionization time-of-flight mass spectrometry (MALDI-TOF MS) bacterial identification has revolutionized clinical microbiology. Typically, bacteria must be first cultured prior to identification; however, several techniques have emerged that allow the identification of bacteria directly from certain specimen types, including blood cultures. The aim of this study was to compare a direct MALDI-TOF MS identification technique of positive blood cultures with those having at least 4-6 hours of sufficient growth

**Methods.** Only blood cultures flagged overnight as positive by the BD BacT/Alert were included for this study. A one ml aliquot was drawn and immediately processed using a lysis centrifugation technique and analyzed using MALDI-TOF (bioMérieux). Positive blood culture samples were also sub-cultured onto agar plates as per standard laboratory practice, incubated for 4-6 hours and if sufficient growth was present, processed using MALDI-TOF. Cultures with insufficient growth are incubated overnight. Direct identifications were compared with those where sufficient growth was achieved

**Results.** Between June 2015 to February 2016, 300 positive blood cultures were included for study. Of these, there were 156 Gram-positive cocci, 152 Gram-negative bacilli, 15 anaerobic organisms, 11 Gram-positive bacilli and 6 yeast. Using a confidence threshold of 99.9%, 69% of all organisms were correctly identified using the direct identification method. The identification of any organism with a confidence threshold <99.9% was not accepted. Approximately 81% of Gram-negative bacilli were correctly identified compared with 64% of Gram-positive cocci 36% of Gram-positive bacilli.

**Conclusion.** The lysis-centrifugation direct identification method is a relatively inexpensive ($1.00) and rapid technique that will allow clinicians to receive the identification of organisms from approximately 70% of bacteremic patients 6 to 24 hours early than waiting for sufficient growth. This should allow clinicians to make better informed empiric antimicrobial choices to manage their patients.

Disclosures. All authors: No reported disclosures.

2013. Not So Common? Late Neuroborreliosis in a Referred Population

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**Background.** The nervous system is known to be the third most commonly (12-20%) affected site in Lyme disease (LD) in the US. Though previous studies reported peripheral neuropathy, encephalopathy, and encephalitis with some frequency in later stage LD, limited contemporary data exist on the frequency, presentation, and outcomes of these entities.

**Methods.** Retrospective review of 1261 patients referred (2000–2013, single center) for presumptive LD was performed for neuroborreliosis. Symptoms less than 3 months were designated early LD. Patients with remote history of treated neuroborreliosis (>2 years) were excluded. The diagnosis of LD followed CDC criteria. Results to antibiotics was assessed at the last clinical visit.

**Results.** Of 185 diagnosed with LD, 19% (35/185) had neuroborreliosis, including 29 early LD (ELD) and 6 late LD (LLD). The mean age was 44 yrs ±20 in ELD and 61±11 in LLD. The median symptom duration was 14d (1–69) in ELD and 18.2 ±7 in LLD. Facial nerve palsy was most common, 54% (19/35 in ELD vs. 0/6 in LLD), followed by meningitis 20% (4/29 vs. 3/6), radiculopathy 20% (6/29 vs. 1/6), encephalopathy 3% (0/29 vs. 1/6), and peripheral neuropathy 3% (0/29 vs. 1/6) (P = 0.001). No encephalitis was identified. The median treatment duration (days) was 45 ±20 in ELD and 56 ±23 (P = 0.005) in LLD. All 35 patients with ELD were treated with doxycycline and/or ceftriaxone (16, 40% VI). Of the 32 followed, 28 (32%) responded to antibiotics, whereas 4/32 (12%) remained symptomatic with median follow-up duration of 72 days. Four non-responsive cases included 1 ELD (radiculopathy) and 3 LLDs (meningitis, encephalopathy, and peripheral neuropathy). The rate of non-response to antibiotics was higher in late LD (4% of ELD vs. 60% of LLD; P = 0.008). There was no statistically significant difference between outcome groups when comparing age, treatment duration, history of anxiety/depression, and route of treatment (P > 0.05, respectively).

**Conclusion.** Encephalopathy, encephalitis, and peripheral neuropathy ascribed to LD were uncommon in this population and poorly responsive to antibiotics. This raises the question whether LD truly was causal or if irreversible damage occurs by late stage LD. Future studies are needed in this regard.

Disclosures. All authors: No reported disclosures.

2014. Screening for Lyme Disease with C6 Peptide at a Veterans Hospital in Long Island, NY

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**Background.** Lyme Disease (LD) is an endemic disease in Long Island, NY caused by Borrelia burgdorferi. The CDC recommends a two tier system for diagnosis of LD, a screening immunoassay followed by confirmatory Western Blot (WB). The C6 peptide (C6P) is a very sensitive screening test for LD and is currently used as the standard method of screening for LD at the Northport Veteran Affairs Hospital.

**Methods.** A retrospective review of all C6P testing was conducted during the periods of 1/1/2010 to 12/31/2016. A total of 2558 C6P tests were performed at the Northport VA Medical Center. Patients with either positive or equivocal assays were then divided into Lyme Positive (LP) or Lyme Negative (LN) groups. Lyme positive was defined as either having an erythema migrans rash, 2 or more IgM bands or 5 or more IgG bands.

**Results.** Out of the 409 C6P tests which were evaluated with a follow up western blot, 181 patients were considered LP and 228 were LN. These two groups are similar in age, gender and race. Results summarized in Table 1 and frequency of Western Blot bands were plotted in figure 1. Six of the LP patients were concordant with babesia and patients were not concordant with anaplasma.

**Conclusion.** A positive tick bite history, headaches, and joint swelling / aches (P < 0.05), were significantly more likely to be present in patients who were considered to be Lyme positive. The most common false positive antibody is the 41kD IgG.