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**Session:** 233. Clinical: Respiratory Track

**Saturday, October 7, 2017: 12:30 PM**

**Background.** Due to improved treatment, aging and decreased infectious complications, respiratory co-morbidities have become more prevalent among HIV-infected patients. Previous data suggests that COPD occurs at higher rates and earlier ages in this population. Additionally, some patients with HIV have been subject to opportunistic infections (OIs) that may cause damage to the lungs, also increasing their risk for chronic lung disease. All of these factors may lead to high rates of respiratory symptoms. For this reason, new methods of screening patients for respiratory symptoms are required. We used the St George’s Respiratory Questionnaire (SGRQ) to assess respiratory symptoms in HIV infected smokers.

**Methods.** Current smokers, HIV-positive and HIV-negative participants, over age 30 and with at least a 15 pack-year smoking history were enrolled. Pulmonary function tests were performed to assess for obstructive defect. SGRQ were administered and served as the primary source for symptom-based data. CT scans were performed to evaluate for underlying lung disease. All patients underwent basic demographic data as well as HIV disease specific information, including CD4 count, HIV viral load, and history of OI.

**Results.** This study included 85 HIV-infected patients and 43 HIV-negative controls. HIV-infected patients had lower tobacco exposure than HIV-negative patients (26.7 ± 43.7 pack-years) and were younger (49 ± 9 vs 56.3). Despite this, symptom-based scores did not vary (26.9 ± 20.7 vs 28 ± 25.4, P > 0.05) between the 2 groups, suggesting symptomatology may be a result of complex interactions between smoking, HIV, and COPD. Within the HIV-infected population, SGRQ scores were found to be most associated with pack-years those with prior OIs had higher SGRQ scores (41.1 ± 21.2 vs 27.2 ± 21.7, P = 0.016).

**Conclusion.** The SGRQ may be a potentially useful modality for assessing respiratory symptoms in PLWH who have known risk factors for COPD. Additionally, further long-term studies in the smoking, HIV-infected population, as well as in HIV patients with prior OIs, are needed in order to obtain a better understanding of the specific risk factors that contribute to the respiratory symptoms and the development of chronic respiratory co-morbidities.

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**Pulmonary Opportunistic Infections**

| History | No History | p-value |
|---------|------------|---------|
| N       | 10         | 73      | 0.107 |
| FEVI/FVC | 0.761±0.089 | 0.792±0.068 | 0.016 |
| SGRQ    | 41.1±21.2  | 27.2±21.7 | 0.032 |
| DLCO    | 17.7±5.01  | 20.7±5.61 | 0.016 |

Disclosures. J. Atkinson, INHALD: Investigator, Research grant; R. Presti, INHALD: Investigator, Research grant

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**Conclusion.** The SGRQ shows promise as a potentially useful modality for assessing respiratory symptoms in PLWH who have known risk factors for COPD. Additionally, future studies are needed to better understand the specific risk factors that contribute to respiratory symptoms and the development of chronic respiratory co-morbidities.

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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 positive blood cultures. Using MALDI-TOF MS identification of bacteria directly from positive blood cultures has revolutionized clinical microbiology. Using a confi incubated overnight. Direct identifications were compared with those where sufficient growth was present, processed using MALDI-TOF. Cultures with insufficient growth are as per standard laboratory practice, incubated for 4–6 hours and if sufficient growth (bioMérieux). Positive blood culture samples were also sub-cultured onto agar plates Bactec® were included for study. A one ml aliquot was drawn and immediately having at least 4–6 hours of sufficient growth. This should allow clinicians to make better informed empiric antimicrobial choices to manage their patients.

**Discussion.** No reported disclosures.

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

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

**Saturday, October 7, 2017: 12:30 PM**

**Background.** The nervous system is known to be the third most commonly (12-15%) 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: 67% of patients was assisted at the last clinical visit was 12 months.

**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 18d (4-60) in LLD. Facial nerve palsy was most common, 54% (19/29 in ELD vs 6/0 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 30 days in ELD and 56 (28-230) in LLD. All 35 patients were treated with doxycycline and/or ceftriaxone (16, 40% of the 32 followed, 28/38 (88%) responded to antibiotics, whereas 43/52 (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.** No reported disclosures.

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

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

**Saturday, October 7, 2017: 12:30 PM**

**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 immunofluorescence assay confirmed 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 coinfected with babesia and 1 patient coinfected with anaplasma.

**Conclusion.** A positive tick bite history, headache, 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.