

ORAL ABSTRACTS

122. Clinical and Microbiologic Characteristics of Pediatric Patients with Lemierre Syndrome

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Background. Lemierre's and Lemierre's like syndromes (LALLS) are rare, life-threatening infections characterized by oropharyngeal disease with thrombophlebitis of the internal jugular vein and septic emboli. While *Fusobacterium necrophorum* is

the classic pathogen, other pathogens are emerging. We evaluated the presenting symptoms, clinical features, pathogens, and outcomes of patients with LALLS in order to identify opportunities to improve the early diagnosis and empiric treatment of LALLS.

Methods. The Intermountain Enterprise Data Warehouse was queried for patients < 21 years old with LALLS from January 1, 2002 to December 31, 2013. Patients were identified by ICD-9 codes for septic thrombophlebitis and/or positive cultures for *Fusobacterium* infections. All cases were validated by manual chart review.

Results. We identified 35 patients with LALLS. 66% were female with a median age of 16 years (IQR: 15-18). There was an average of 2.5 LALLS cases annually from 2002-2007; this increased to 3.3 cases annually from 2008-2013 ($p = 0.01$). Fever (100%), sore throat (82%), and lower respiratory symptoms (60%) were the most common presenting symptoms. The median duration of symptoms before admission was 7 days (IQR: 6-8). 91% of patients were evaluated at least once before admission. 71% of patients had rapid strep testing performed and 49% had monospot testing, which were negative in 96% and 94% of cases, respectively. Before recognition of LALLS, 26% of patients received narcotics and 14% received steroids for severe pharyngitis as outpatients. 60% of patients required intensive care. 74% of patients had a jugular vein thrombosis or septic embolization. *F. necrophorum* (57%), *F. gonidiaformans* (17%), *Fusobacterium* species (9%), and Group C *Streptococcus* (9%) were the most common bacteria isolated; there was one case of MRSA. 17% had two bacterial pathogens identified with Group C *Streptococcus* found in 50% of co-infections. There were no deaths.

Conclusion. With the apparent increase in case numbers, clinicians should have a high index of suspicion for LALLS in adolescent patients with severe pharyngitis who test negative for *S. pyogenes* and EBV or present more than once for pharyngitis. Empiric therapy for suspected LALLS should consider possible causative pathogens beyond *Fusobacterium*.

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