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Diagnosis, Management, and Treatment of Lymphadenitis and Deep Neck Space Infections at a Children's Hospital

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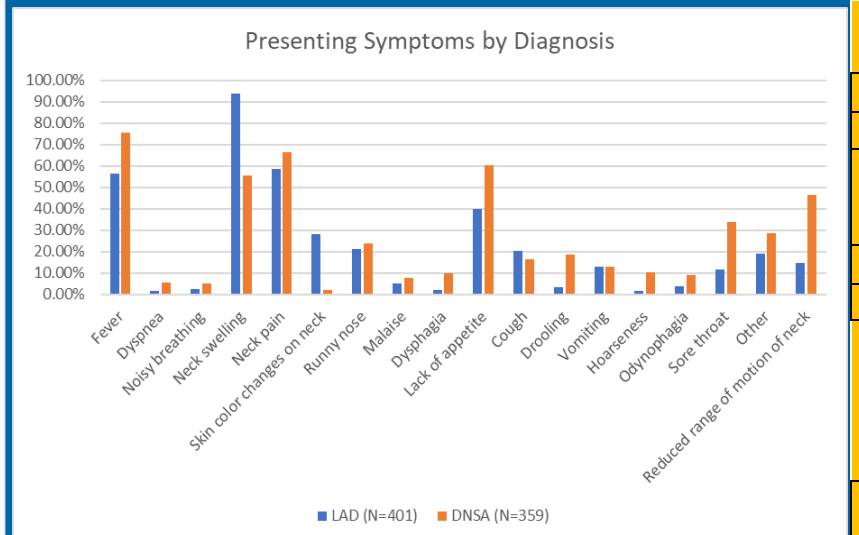
Diagnosis, Management, and Treatment of Lymphadenitis and Deep Neck Space Infections at a Children's Hospital

INTRODUCTION

- Although cervical lymphadenitis (LAD) and deep neck space abscesses (DNSA) are relatively common pediatric diagnoses, there is no standardized strategy for their management
- Retrospective review of cases over a ten year period

METHODS

- Charts obtained using ICD9/ICD10 codes
- Dates: 1/1/10-12/31/20
- Identified 1,237 charts
- Collected information on presenting symptoms, imaging, antibiotics, microbiology, and surgery
- Included diagnoses: Cervical lymphadenitis, Retropharyngeal and Parapharyngeal abscesses
- Excluded: other lymphadenitis, inflammatory or autoimmune conditions, viruses, atypical bacteria (e.g. tuberculosis, tularemia)



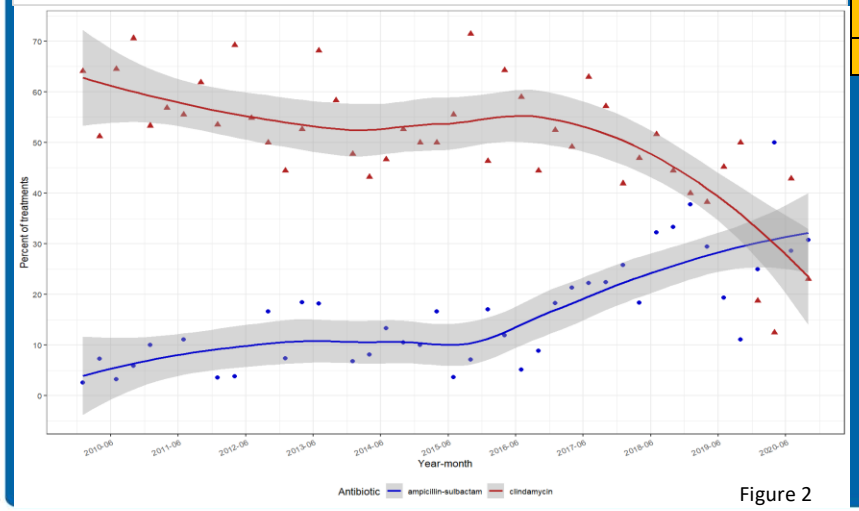


Figure 2

Table	LAD (N=401)	DNSA (N=359)	P
Age	24 [14, 60]	48 [24, 72]	<0.0001
Gender (Male)	219 (54.6%)	214 (59.6%)	0.187
Race			0.518
-Black	83 (20.7%)	57 (15.9%)	
-White	227 (56.6%)	228 (63.5%)	
CT Scan	239 (59.6%)	353 (98.3%)	<0.0001
Ultrasound	248 (62.0%)	36 (10.1%)	<0.0001
Abscess Culture:	N=163 (40.6%)	N=229 (63.8%)	<0.0001
-Negative	32 (19.6%)	30 (13.1%)	
-Group A Strep	21 (12.9%)	97 (42.3%)	
-MSSA	48 (29.4%)	15 (6.5%)	
-MRSA	42 (25.7%)	24 (10.5%)	
Antibiotics:	N=398	N=358	<0.0001
1	193 (48.5%)	103 (28.8%)	
2+	205 (51.5%)	255 (71.2%)	
Surgical drainage	157 (39.1%)	257 (71.6%)	<0.0001

DISCUSSION

- Children with LAD were younger, had more visible features, were less likely to have CT or receive >1 antibiotic, and more likely to have *S. aureus*
- Children with DNSA were older, had symptoms not typically seen in LAD cases, almost always received a CT, and were more likely to receive ≥2 antibiotics.
- Opportunities for stewardship include: empiric antibiotic choice and number, as well as use of imaging

RESULTS

- 760 patients included
- **Demographics**: patients with DNSA were older; no difference in gender or race across groups (Table)
- **Symptoms**: Decreased ROM, sore throat more common in DNSA; neck swelling and skin color change more common in LAD
- **Imaging**: Nearly all DNSA had CT; Ultrasound more common in LAD vs. DNSA (62% vs 10%)
- **Microbiology**: GAS more likely in DNSA; *S. aureus* more common in LAD
- **Antibiotics**: Clindamycin most used antibiotic in both groups
  - LAD: 86.1%
  - DNSA: 82.3%
- Clindamycin was the sole agent in 40% of all cases
- ≥2 antibiotics more likely in DNSA vs LAD
- Ampicillin-sulbactam usage increased within the second half of the study, surpassing clindamycin in 2020 (Figure 2)

LOVE WILL.

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