Children's Mercy Kansas City SHARE @ Children's Mercy

Research Days

GME Research Days 2022

May 4th, 11:30 AM - 1:30 PM

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

Aaron Shaw Children's Mercy Hospital

Let us know how access to this publication benefits you

Follow this and additional works at: https://scholarlyexchange.childrensmercy.org/researchdays

Part of the Bacterial Infections and Mycoses Commons, Higher Education and Teaching Commons, Otorhinolaryngologic Diseases Commons, and the Pediatrics Commons

Shaw, Aaron, "Diagnosis, Management, and Treatment of Lymphadenitis and Deep Neck Space Infections at a Children's Hospital" (2022). *Research Days*. 8. https://scholarlyexchange.childrensmercy.org/researchdays/GME_Research_Days_2022/ResearchDay3/8

This Poster Presentation is brought to you for free and open access by the Conferences and Events at SHARE @ Children's Mercy. It has been accepted for inclusion in Research Days by an authorized administrator of SHARE @ Children's Mercy. For more information, please contact hlsteel@cmh.edu.

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)

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



Table	LAD (N=401)	DNSA (N=359)	Р
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 morelikely in DNSA vs LAD
- Ampicillin-sulbactam usage increased within the second half of the study, surpassing clindamycin in 2020 (Figure 2)

LOVE WILL.

Aaron Shaw MD, Brian Lee PhD, MPH, Lauren Kazmaier, Angela Myers MD, MPH, FAAP, PFIDS Children's Mercy Kansas City

Figure 2

