Studies of pediatric neck infections demonstrate an increase in the prevalence of MRSA, and predominance of Staphylococcus aureus (S. aureus) in infants, and commonly polymicrobial infections. Thus, some providers treat acute neck infections with empiric broad spectrum antibiotics, often with two drugs. Our institution often uses clindamycin plus ampicillin-sulbactam as empiric therapy for hospitalized children with acute neck infections. We aimed to identify the microbiology of acute neck abscesses at our institution to determine if stratifying by age and abscess location would allow for single agent therapy.

### Table 1. Causative organism based on anatomic location of neck infection.

| ORGANISM       | MEDIAL | LATERAL | BOTH | TOTAL |
|----------------|--------|---------|------|-------|
| Staphylococcus  |        |         |      | 11    |
| aureus          | 11     | 31      | 2    | 44    |
| Group A         | 16     | 6       | 0    | 22    |
| Streptococcus   |        |         |      | 16    |
| anginosus       | 16     | 2       | 1    | 19    |
| Fusobacterium   | 6      | 1       | 0    | 7     |
|Prevotella       | 7      | 0       | 0    | 7     |
| Haemophilus influenzae | 4   | 1       | 0    | 5     |
| Streptococcus   | 4      | 0       | 0    | 4     |
| viridans        | 3      | 0       | 0    | 3     |
| Peptostreptococcus | 3     | 0       | 0    | 3     |
| Eikenella       | 3      | 0       | 0    | 3     |
| Group C         | 1      | 0       | 0    | 1     |
| Streptococcus   | 0      | 1       | 0    | 1     |
| Other β-hemolytic Streptococcus | 0 | 0 | 0 | 0 |
| Streptococcus   | 1      | 0       | 0    | 1     |
| pneumoniae      | 0      | 0       | 0    | 1     |

### Table 1. Clinical Characteristics of Children Treated with Double Gram-Positive Coverage

| Age   | Primary Agent | Secondary Agent | Source of Infection | MSSA/MRSA | Days of Positive Cultures | Duration of Double Coverage (days) | Central Venous Access Present | Hospital Out | PN-IV |
|-------|---------------|-----------------|---------------------|-----------|--------------------------|----------------------------------|-----------------------------|--------------|-------|
| 6-weeks|          |                 | Staphylococcus aureus| MSSA | 8 | 15 | Yes | PN-IV | 1151. Clinical Characteristics of Persistent Staph Aureus Bacteremia in Children Nicholas Venturelli, MD; Palak Bhagat, PharmD, BCPS; Allison Nelson, PharmD; Madan Kumar, DO; University of Chicago Medical Center, Chicago, Illinois; University of Chicago Medicine Comer Children's Hospital, Geneva, Ill; University of Chicago, Chicago, IL Session: P-64. Pediatric Bacterial Studies (natural history and therapeutic) Background. Persistent Staphylococcus aureus bacteremia (pSAB) is a poorly defined entity, but associated with significant morbidity and mortality in children. We aim to better describe the epidemiological features of this clinical entity. Methods. We performed a retrospective case series analysis of pediatric patients with pSAB at a single center children's hospital using electronic medical data from 2016 – 2020. Bacterial persistence was defined as culture growth > 72 hours after first blood culture. Results. Twenty-two patients with pSAB were included in the analysis. Sources of persistent infection were endovascular infection (n=11, 50%), osteoarticular infection (n=6, 27%), isolated central line associated blood stream (n=4, 18%), isolated skin and soft tissue infection (n=2, 9%), and no known primary infectious site (n=2, 9%). Methicillin resistance occurred in 41% (n=9) of cases of pSAB. Total duration of therapy varied, with a median of 4 weeks from negative cultures (range of 2 - 8 weeks). Total days of positive cultures in pSAB were not significantly associated with methicillin susceptibility of the bacterial isolate, use of double gram-positive coverage, nor presence of a central venous catheter. Use of double gram-positive coverage occurred in 50% of cases with a mean duration of therapy of 11 days, most frequently in cases of septic thrombophlebitis (Table 1). Rifampin and gentamicin were the most commonly used agents. | | | |

Conclusion. Children presenting with persistent S. aureus bacteremia present with a heterogeneous group of underlying conditions and epidemiological features. While pediatric recommendations for double gram-positive coverage for synergy have not been established, their use for pSAB is common, especially in endovascular infections where culture persistence is often an expected outcome. Further research should examine risk factors for pSAB and define optimal treatment modalities and duration. 

Disclosures. All Authors: No reported disclosures

1152. Microbiology of Pediatric Neck Infections Based on Age and Anatomic Location

Joana Dimo, DO; Tracy N. Zembrzuski, PharmD; Glenn O. Bushe, MS; Michelle L. Mitchell, MD; Medical College of Wisconsin Affiliated Hospitals/Children's Wisconsin, Wauwatosa, Wisconsin; Children's Hospital of Wisconsin, Menomonee Falls, WI Session: P-64. Pediatric Bacterial Studies (natural history and therapeutic) Background. Studies of pediatric neck infections demonstrate an increase in methicillin resistant Staphylococcus aureus (MRSA), and predominance of Staphylococcus aureus (S. aureus) in infants, and commonly polymicrobial infections. Thus, some providers treat acute neck infections with empiric broad spectrum antibiotics, often with two drugs. Our institution often uses clindamycin plus ampicillin-sulbactam as empiric therapy for hospitalized children with acute neck infection. We aimed to identify the microbiology of acute neck abscesses at our institution to determine if stratifying by age and abscess location would allow for single agent therapy.

| Age   | Primary Agent | Secondary Agent | Source of Infection | MSSA/MRSA | Days of Positive Cultures | Duration of Double Coverage (days) | Central Venous Access Present | Hospital Out | PN-IV |
|-------|---------------|-----------------|---------------------|-----------|--------------------------|----------------------------------|-----------------------------|--------------|-------|
| 6-weeks|          |                 | Staphylococcus aureus| MSSA | 8 | 15 | Yes | PN-IV | 1151. Clinical Characteristics of Persistent Staph Aureus Bacteremia in Children Nicholas Venturelli, MD; Palak Bhagat, PharmD, BCPS; Allison Nelson, PharmD; Madan Kumar, DO; University of Chicago Medical Center, Chicago, Illinois; University of Chicago Medicine Comer Children's Hospital, Geneva, Ill; University of Chicago, Chicago, IL Session: P-64. Pediatric Bacterial Studies (natural history and therapeutic) Background. Persistent Staphylococcus aureus bacteremia (pSAB) is a poorly defined entity, but associated with significant morbidity and mortality in children. We aim to better describe the epidemiological features of this clinical entity. Methods. We performed a retrospective case series analysis of pediatric patients with pSAB at a single center children's hospital using electronic medical data from 2016 – 2020. Bacterial persistence was defined as culture growth > 72 hours after first blood culture. Results. Twenty-two patients with pSAB were included in the analysis. Sources of persistent infection were endovascular infection (n=11, 50%), osteoarticular infection (n=6, 27%), isolated central line associated blood stream (n=4, 18%), isolated skin and soft tissue infection (n=2, 9%), and no known primary infectious site (n=2, 9%). Methicillin resistance occurred in 41% (n=9) of cases of pSAB. Total duration of therapy varied, with a median of 4 weeks from negative cultures (range of 2 - 8 weeks). Total days of positive cultures in pSAB were not significantly associated with methicillin susceptibility of the bacterial isolate, use of double gram-positive coverage, nor presence of a central venous catheter. Use of double gram-positive coverage occurred in 50% of cases with a mean duration of therapy of 11 days, most frequently in cases of septic thrombophlebitis (Table 1). Rifampin and gentamicin were the most commonly used agents. | | | |

Conclusion. Children presenting with persistent S. aureus bacteremia present with a heterogeneous group of underlying conditions and epidemiological features. While pediatric recommendations for double gram-positive coverage for synergy have not been established, their use for pSAB is common, especially in endovascular infections where culture persistence is often an expected outcome. Further research should examine risk factors for pSAB and define optimal treatment modalities and duration. 

Disclosures. All Authors: No reported disclosures

1153. ESBL Producing E. coli Urinary Tract Infections in Children: Is Carbapenem Always Necessary?

Ricardo Zavala, MD, Diva del Carmen, Pediatric Resident; Gabriel Ivan Narvaez Oviedo, Pediatric Resident; Juan Pablo Londoño-Ruiz, Fellow Pediatric Infectious Diseases; Ivan Felipe Gutierrez Tobar, n/a; Universidad El Bosque, Bogotá, Distrito Capital de Bogota, Colombia; Clínica Infantil Colsubsidio, Clínica Infantil Santa Maria del Lago, Bogotá, Distrito Capital de Bogota, Colombia Session: P-64. Pediatric Bacterial Studies (natural history and therapeutic) Background. Urinary tract infections (UTI) are common in children with a prevalence of 5% in infants. UTI are the main reason for beginning antibiotics in children's hospitals and E. coli is approximate 80% of urinary pathogens.

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