1516. Early-Onset Neonatal Sepsis Due to Haemophilus influenzae
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Background. Haemophilus influenzae causes serious invasive disease across all ages, but has not been widely described in neonatal early-onset sepsis (EOS). EOS, likely caused by organisms acquired from the mother, can lead to significant morbidity and mortality, particularly for preterm infants. There are reports of increasing ampicillin resistance in H. influenzae. We describe a case series of EOS due to H. influenzae at our institution.

Methods. Neonatal H. influenzae EOS was identified based on positive sterile site cultures at ≤72 hours of life in infants hospitalized at an Intermountain Healthcare (IHC) facility from 2007–2017. Demographics, clinical and microbiologic data were obtained through an IRB-approved electronic chart and microbiology review.

Results. Twelve neonates with H. influenzae EOS were identified over 11 years. Nine were preterm (<37 weeks); five were extremely preterm (<28 weeks). Eight had low birth weight (<2.500 g); five had very low birth weight (<1.500 g). Most (66%) mothers were primigravida; median maternal age was 24.5 years. Only four (33%) mothers had prolonged rupture of membranes (≥24 hours).

All infants had signs and symptoms of sepsis within 24 hours of birth. The majority (10/12) had a blood culture positive for H. influenzae from the time of delivery. Two infants had negative blood cultures but a H. influenzae-positive placental culture. No infant had >1 day of bacteremia. One H. influenzae isolate was serotype b, one serotype c and one non-typeable, but most isolates (9/12) were not serotyped. Only one isolate produced a β-lactamase. All infants were empirically started on ampicillin and gentamicin at delivery. Nine infants underwent lumbar puncture, two were suggestive of meningitis but cultures were negative. Five infants developed intraventricular hemorrhage and six required vasoactive medications. No infant died.

Conclusion. H. influenzae is an infrequent but important cause of neonatal EOS. H. influenzae EOS may occur in infants with known risk factors, including prolonged rupture of membranes, prematurity, and low birth weight. Recognition of H. influenzae as a potential pathogen in EOS has implications for the use of empiric antibiotic therapy particularly ampicillin, in septic neonates.

Disclosures. All authors: No reported disclosures.

1517. Multidrug-Resistant Escherichia coli ST131 Late-Onset Neonatal Sepsis in Premature Twins Linked to Contaminated Maternal Frozen Breast Milk
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Background. Sequence type 131 (EC-ST131) is a prevalent cause of extraintestinal Escherichia coli infection, including in neonates, and accounts for a majority of multidrug-resistant strains. Rare reports of neonatal unit outbreaks have emerged, with one linking the source to freshly expressed breast milk (BM) sharing. We report our experience with one linking the source to freshly expressed breast milk (BM) sharing.

Methods. Blood culture isolates were from twin girls born at 24–1/7 weeks’ gestation who developed severe sepsis caused by ampicillin- and gentamicin-resistant E. coli on days 11 (Baby A; died) and 8 (Baby B; survived) of life; both isolates were typed as ST131 by MLST and were recovered from 1 collected on day 5 of life. DNA was extracted from BM samples predating BM collection on days 11 (Baby A; died) and 8 (Baby B; survived) of life; both BM isolates were typed as ST131 by MLST. BM provided by their mother. Five remaining frozen BM samples predating BM collection on days 11 (Baby A; died) and 8 (Baby B; survived) of life; both BM isolates were typed as ST131 by MLST.

Results. The 2 blood and 1 BM isolates were typed as ST131 by MLST and were indistinguishable by cgMLST. Of the 2513 alleles queried, only 263 (10.5%) differed from the ST131 strain SCB34 (figure). Thus, our EC-ST131 cluster isolates belong to the same clonal complex as, but are genetically divergent from, SCB34. In addition to the E. coli described above isolated from a BM sample, all 5 frozen BM samples grew multiple morphotypes of coagulase-negative staphylococci. The mother had acute chorioamnionitis and was treated with intravenous ampicillin, gentamicin, and metronidazole for 48 hours immediately after delivery.

Conclusion. Despite frozen BM persistent antibiotic activity, it is a potential source of multidrug-resistant bacteria for neonates, as evidenced by this report of EC-ST131 neonatal sepsis in premature twins.

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1518. The Microbiology of Osteoarticular Infections in Patients with Sickle Hemoglobinopathies at Texas Children’s Hospital, 2011–2018
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Background. Osteoarticular infections (OAI) are common in patients with sickle hemoglobinopathies. Osteoarticular infections (OAI) are common in patients with sickle hemoglobinopathies. Subperiosteal/intraosseous abscess formation and the need for surgical procedures were common. The role of oral antibiotics for the treatment of OAI in patients with sickle hemoglobinopathies warrants further study.

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