During Enterovirus (EV) Season

Enterovirus Risk Factors, Diagnostic Workup, and Medical Decision Making
1. The microbiology laboratory determines when CSF enterovirus PCR testing is performed based on seasonal variation in the prevalence of disease.
2. EV testing is performed in all febrile infants less than 60 days during EV season, regardless of CSF cell count, in addition to the full diagnostic workup described in the initial section “Full Sepsis Evaluation of Febrile Infants.”

Inpatient Management
1. Empiric administration of intravenous ampicillin and cefotaxime (see dosing guidelines above) is required.
2. If the EV CSF PCR is positive and the infant meets all of the following criteria on the EV Checklist, antibiotics can be stopped and the infant can be discharged home.
   a. Infant is greater than 1 week of age Infant is well-appearing and afebrile
   b. All other cultures are negative for 24 hours
3. If the EV CSF PCR is negative, hospital discharge is planned when urine, blood, and CSF cultures are negative for at least 48 hours and when the patient appears well.

Rationale and Evidence Base
Non-polio EV infections commonly cause fever in infants less than 60 days of age. The use of PCR to identify febrile infants with non-polio EV infections may decrease length of hospital stay, unnecessary antibiotic administration, and charges. The studies supporting the use of EV PCR screening and early discharge are retrospective and prospective cohort studies. (Byington, Taggart et al. 1999; Nigrovic and Chiang 2000; Spicher, Berclaz et al. 2000; Rittichier, Bryan et al. 2005)

Infants less than 1 week of life with non-polio EV infections are at a high risk of developing a sepsis-like condition, including meningocencephalitis, myocarditis, and hepatitis. Differentiating neonatal EV from disseminated HSV and bacterial sepsis can be extremely difficult. Presenting symptoms include poor feeding, lethargy, fever, irritability, hypoperfusion, and jaundice. The mothers of these infants often report having a fever and abdominal pain (different from labor pain) the day of delivery. The severity of the illness presumably results from overwhelming viremia in the absence of passive antibody protection in the infant. (Abzug, 1993)

GRADE:
Infectious Disease Consult is RECOMMENDED based on very low quality of evidence for infants less than 1 week of age that are EV positive. The recommendation is based on the relatively low incidence and potential severity of neonatal enterovirus infections.

We STRONGLY RECOMMEND based on low quality of evidence for EV testing with an EV CSF PCR in all febrile infants less than 60 days.

We RECOMMEND based on low quality of evidence for stopping antibiotics and discharging patients home if the EV PCR is positive and the patient is greater than 1 week, well appearing, afebrile, and all cultures are negative after 24 hours. (Abzug, Levin et al. 1993; Kaplan, Harper et al. 2000)
References


