

Young Infant Characteristics and Laboratory Findings Associated with a Positive FilmArray Meningitis/Encephalitis PCR Panel

Abigail Hoenes, Jimme Sierakowski DO, Kevin Polley MD, Matt Grisham MD, Jenny Meredith PhD, Katie Richardson MD, Nicholas M. Potisek MD

University of South Carolina School of Medicine Greenville

Introduction

- Meningitis and encephalitis are associated with significant morbidity and mortality.
- Early identification of viral and bacterial etiologies of meningitis can influence management and outcomes.
- The current gold standard for bacterial meningitis diagnosis is cerebrospinal fluid (CSF) culture.
- Meningitis/Encephalitis (ME) CSF PCR panels are being used more frequently to detect both bacterial and viral pathogens in a timelier fashion.
- ME PCR panels have been studied in an array of patient populations, but few studies have focused on young infants (≤ 90 days).

Objectives

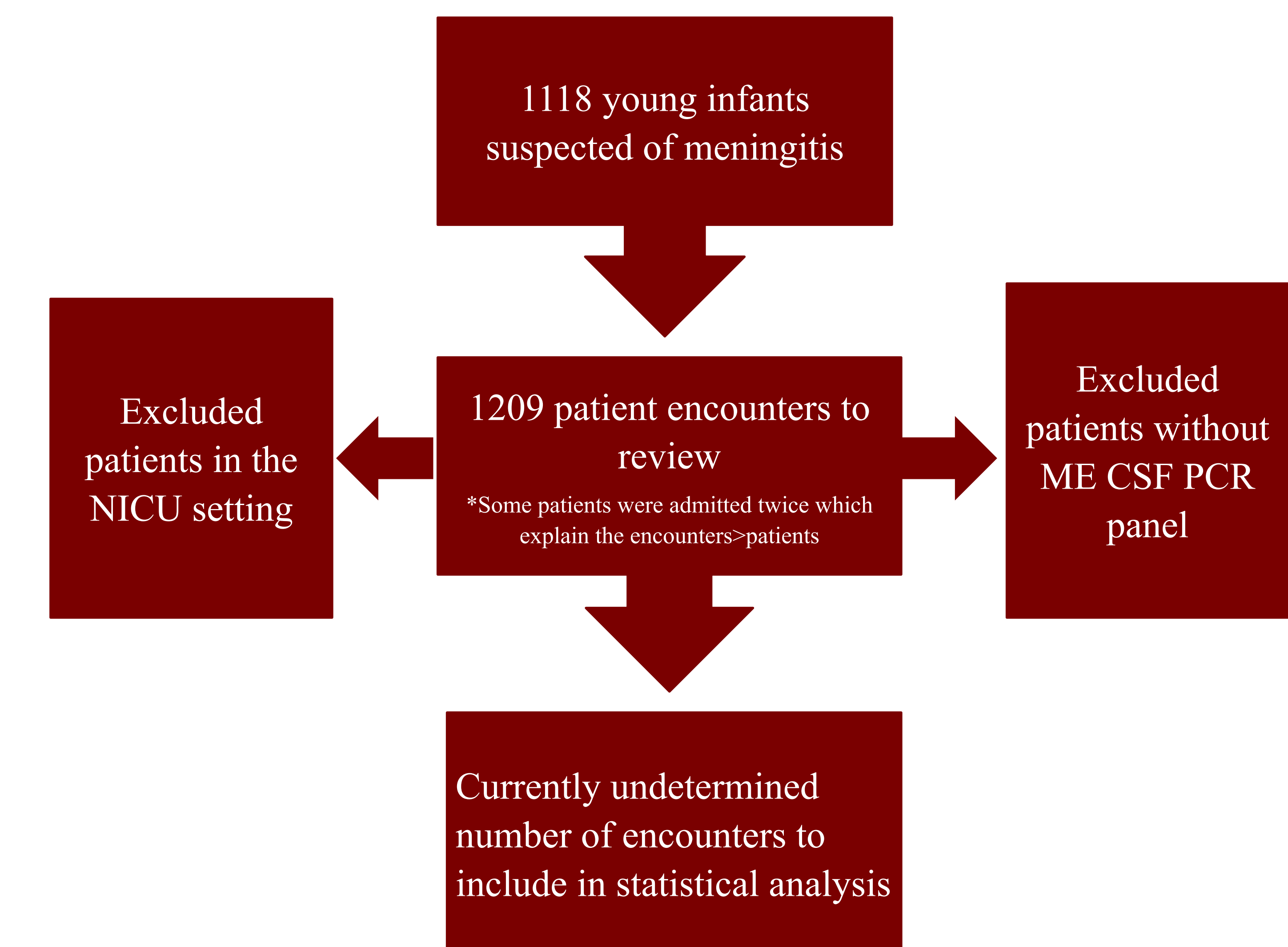
- To describe the clinical and laboratory characteristics associated with a positive ME PCR panel in young infants evaluated in the emergency department or the hospital setting.
- Understand the differences between ME panel positive and negative patients may guide quality improvement efforts to utilize the ME panel in a more targeted approach to identify young infants more likely to have meningitis.

Methods

Pathogens detectable by CSF PCR panel
Cytomegalovirus
EV
HSV-1
HSV-2
HHV-6
Human Parechovirus
Varicella-Zoster Virus
Escherichia coli K1
Haemophilus influenzae
Listeria monocytogenes
Neisseria Meningitidis
Streptococcus agalactiae
Streptococcus pneumoniae
Cryptococcus neoformans/C. Gattii

- A single-site retrospective chart review is being conducted. The focus patient population is young infants evaluated in the ED or hospital setting where a ME PCR panel was ordered during the initial evaluation.
- De-identified patient demographics, clinical characteristics, laboratory evaluation, imaging, treatment provided, hospital course and outcomes will be collected from patient charts and recorded into REDCap.

Methods Continued



Results & Conclusions

- The data collected from this study will hopefully contribute to understanding the differences between ME panel positive and negative patients may guide quality improvement efforts to utilize the ME panel in a targeted approach to identify young infants more likely to have meningitis.