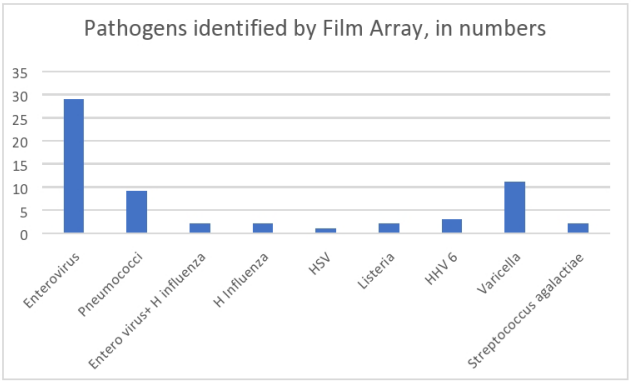

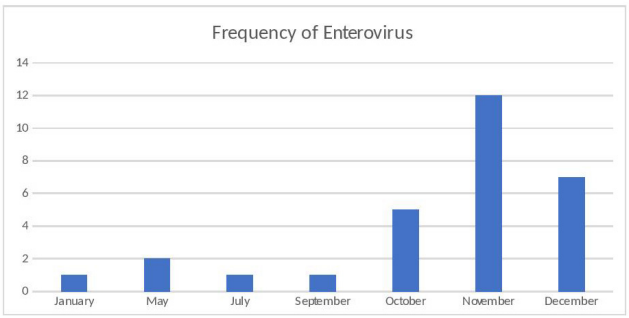

Pathogens identified in CSF culture whose FA ME panel was negative

Clinical diagnosis	CSF bacterial culture
aseptc meningitis	*Aerococcus viridans*
pyogenic	*Streptococcus species*
meinigitis/ epidural abscess	*Micrococcus luteus*
auto-immune encephalitis	*Aeromonas salmonicida*
septic cerebral venous thrombosis, meningitis	*Pseudomonas species*
Traumatic brain injury	*Klebsiella Pneumoniae*
Traumatic brain injury	*Klebsiella Pneumoniae*

Disclosures. **All authors:** No reported disclosures.

1399. A Prospective Cohort Study Regarding the Impact of Biofire® FilmArray® Meningitis/Encephalitis (FA) Panel in Children with Suspected Central Nervous System Infection

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Background. Rapid detection of pathogens involved in central nervous system (CNS) infections could be important for the optimal patient management and overall hospitalization cost. The aim of the study was to evaluate the possible benefits with the use of BioFire® FilmArray® meningitis/encephalitis (FA) panel in children with suspected CNS infection.

Methods. A prospective cohort study, was performed on children admitted to a tertiary pediatric hospital, over a period of 1 year (April 2018–April 2019), with possible CNS infection and cerebrospinal fluid (CSF) pleocytosis (>15 cells/mm^3). For each child that FA was used for the diagnosis, an age-matched control was selected, and separate molecular CSF microbiological tests were sent according to pediatrician's discretion. Conventional microbiological procedures were performed in all children. Length of hospital stay, duration of antimicrobials, and total cost of hospitalization were compared between groups. FA enables rapid automated cerebrospinal fluid testing for 14 common viral, bacterial and yeast pathogens that cause CNS infections. The cost was estimated according to ICD-10 diagnosis standard cost, adding additional daily hospitalization cost, FA or other molecular microbiological tests costs.

Results. A total of 142 children were included in the study (71 cases). The median age of cases and controls was 2.5 months (IQR: 1–72) and 2 months (IQR: 0.7–36) respectively ($P = 0.157$). A pathogen was detected in 38/71 (53.5%) children with the use of FA and in 16/71 (22.5%) in the control group ($P < 0.001$). In aseptic meningitis cases a virus was detected in 27/60 (45%) and in 11/64 (16.4%) controls ($P < 0.001$). Length of stay in cases and controls with aseptic meningitis was 5 days (IQR: 4–8) and 8 (IQR: 6–10) respectively ($P < 0.001$). The median duration of antimicrobials in cases was 4 days (IQR: 2–5.7) and 7 (IQR: 5–10) respectively ($P < 0.001$). The hospitalization cost was calculated in cases and controls 1,042 (IQR: 932–1372€) and 1,522 (IQR: 1,302–1,742€) respectively ($P < 0.001$).

Conclusion. The use of FA was able to reduce significantly the hospitalization days and the total cost comparing to the control group in children with suspected CNS infection.

Disclosures. **All authors:** No reported disclosures.

1400. Impact of a Multiplex Polymerase Chain Reaction Meningitis/Encephalitis Panel and Antimicrobial Stewardship Bundle on Antimicrobial Use in Patients with Suspected Meningitis or Encephalitis

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Session: 155. CNS Infections
Friday, October 4, 2019: 12:15 PM

Background. Optimal treatment of meningitis relies on prompt diagnostic evaluation and initiation of appropriate antimicrobials. The meningitis/encephalitis panel (MEP) is a multiplex rapid polymerase chain reaction, with the ability to detect 14 community-acquired pathogens in 1 hour. The purpose of this study was to evaluate impact of the MEP on de-escalation of antimicrobials in adult inpatients with suspected meningitis at a large community teaching hospital.

Methods. This single-center retrospective quasi-experimental pre/post study included adults admitted for ≥48 hours and initiated on antimicrobial therapy for suspected meningitis. Those with healthcare-associated meningitis, immunosuppression, initiation of antimicrobials >8 hours prior to lumbar puncture (LP), and use of antimicrobials for another indication were excluded. The pre-group included patients admitted prior to MEP introduction. The post-group included patients with the MEP performed. An antimicrobial stewardship bundle consisting of a meningitis order set, provider education, and use of a real-time meningitis alert in clinical decision support software was also implemented in the post-group. The primary outcome was percentage of patients experiencing antimicrobial de-escalation ≤48 hours after LP. Secondary outcomes included time to de-escalation, total duration of antimicrobial therapy (DOT), and hospital length of stay (LOS).

Results. A total of 45 patients were included in the study (23 pre-group and 22 post-group). Baseline characteristics were similar between groups. The percentage of patients experiencing de-escalation of antimicrobials ≤ 48 hours after LP increased by 44% in the post-group (82% vs. 38%, $P = 0.005$). The overall median time to de-escalation of antimicrobials decreased by 35 hours [11.1 (IQR 5.6, 17.6) vs. 46.1 (IQR 18.4, 66.5); $P = 0.002$] and the median time to de-escalation after LP decreased by 38 hours [13.6 (IQR 8.3, 20.3) vs. 51.6 (IQR 44.2, 69.8); $P < 0.001$]. No statistically significant difference in hospital LOS or total DOT was seen.

Conclusion. Implementation of the MEP and antimicrobial stewardship bundle increased the percentage of patients de-escalated in 48 hours and decreased the time to de-escalation. However, this did not impact the total DOT or hospital LOS.

Disclosures. **All authors:** No reported disclosures.

1401. Minimal Cerebrospinal Concentration of Miltefosine Despite Therapeutic Plasma Levels during the Treatment of Amebic Encephalitis

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Session: 155. CNS Infections
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Background. Miltefosine is an alkylphosphocholine compound used primarily for the treatment of leishmaniasis that also demonstrates *in vitro* and *in vivo* anti-amebic activity against *Acanthamoeba* species. As such, recommendations for treatment of amebic encephalitis generally include miltefosine therapy. Data support a minimum amebicidal concentration (MAC) of at least 16 µg/mL is required for most *Acanthamoeba* species. Given the high mortality associated with amebic encephalitis and a paucity of data regarding miltefosine levels in the plasma and cerebrospinal fluid (CSF) *in vivo*, we sought to determine whether a patient being treated with oral miltefosine at a higher-than-recommended dose obtained therapeutic plasma and CSF concentrations.

Methods. A patient with brain-biopsy-confirmed *Acanthamoeba* encephalitis was initiated on miltefosine 50mg by mouth every 6 hours (q6h), a higher frequency of therapy than recommended in the scant available literature (which suggests doses of 50 mg every 8 hours). Plasma and CSF miltefosine concentrations were collected on day 7 of treatment. CSF was collected via an external ventricular drain over a period of 1 hour. The quantification of miltefosine was performed using a Waters Xevo TQ-S triple quadrupole mass spectrometer coupled with a Waters Acquity UPLC I-class system.

Results. The trough plasma and CSF concentrations (taken 8 hours post-dose) were 16.2 and 0.007 µg/mL, respectively, resulting in a miltefosine plasma to CSF ratio