1006. Diagnostic accuracy of CSF cell index and corrected CSF white blood cell count in healthcare-associated ventililts and menigitis after intracranial hemorrhage
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Background. The diagnosis of healthcare-associated meningitis and ventriculitis (HCAMV) in patients with intracranial hemorrhage (ICH) is challenging. The purpose of this study was to evaluate the diagnostic accuracy of routine cerebrospinal fluid (CSF) studies including a cell index and a corrected white blood cell (WBC) count.

Methods. Case control study of adult patients with the diagnosis of ICH and HCAMV at a large tertiary care hospital in Houston, Texas from 2003 to 2016. Cases were defined as patients with ICH and HCAMV as documented by a positive CSF culture. Controls were selected as patients with ICH without evidence of HCAMV, no previous antibiotic therapy and a negative CSF culture. Cases and controls were matched 1:2 by age, Glasgow Coma Scale (GCS) and Apache II scores. Cell index was calculated using the following formula: (CSF leucocytes / CSF erythrocytes) / (blood leucocytes / blood erythrocytes). Corrected WBC count was calculated using the following formula: CSF leucocytes / (CSF erythrocytes/1,000). Area under the curve of receiver operating characteristic (AUC-ROC) and 95% confidence interval (CI) for CSF cell index greater than or equal to absolute value of 1, corrected CSF WBC count greater than 5 K/μL, CSF lactate greater than 4 mmol/L, and CSF glucose less than 40 mmol/L, respectively, were calculated in order to determine the accuracy of these cutoffs

Results. A total of 120 patients with ICH were included in this study; 40 patients had proven HCAMV whereas 80 patients had ICH with no evidence of HCAMV. Matching of cases and controls by age, GCS, and Apache II score was appropriate (p>0.05). The AUC-ROC values for CSF cell index, corrected WBC count, CSF lactate, and CSF glucose were all at least 0.609 (95% CI= 0.449–0.768), 0.731 (95% CI = 0.589–0.872), 0.719 (95% CI = 0.573–0.864), and 0.609 (95% CI = 0.449–0.768), respectively.

Conclusion. This study demonstrated poor accuracy of CSF cell index, corrected CSF WBC count, CSF lactate, and CSF glucose in diagnosis of HCAMV after ICH.

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1007. Achieving Optimal Specialty Cerebrospinal Fluid (CSF) Testing: Are Electronic Medical Record Order Sets Helpful?
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Background. Specialty PCR testing has become available for lumbar puncture to determine the cause of infectious meningitis and encephalitis. Testing with low pre-test probability may increase antimicrobial therapy while results are pending and create increased direct costs. We aim to describe the appropriateness of testing before and after the implementation of electronic medical record (EMR) order sets designed to reduce excessive testing of CSF by creating two lists of tests: (1) a routine panel for diagnostic workup of central nervous system (CNS) infections, identifying the underlying etiologies is particularly important to prevent lifelong neurological complications and death.

Methods. A total of 100 brain abscess patients and 100 healthy controls were included in the study. Predisposing factors were identified in 70 brain abscess patients. Of 100 brain abscess patients, 66 were culture positive. MMP-1 1607 1G/2G, MMP-2: C-1306-T, MMP-3: -1171 5A/6A, and MMP-9 C-1562T genotypes were detected by PCR-RFLP. Levels of these MMPs were determined in patients’ sera by ELISA and correlated with different genotypes.

Results. The genotypes distributions of MMP-1 1607 1G/2G, MMP-2: C-1306-T, MMP-3: -1171 5A/6A, and MMP-9 C-1562T polymorphisms lead to increased production of these molecules, which appear to be a risk for the development of brain abscess in developing countries, including Indonesia. While patients can often be categorized into broad groups, such as males and females or patients with different ages, individuals with mutant genotypes had elevated levels of these MMPs. Furthermore, heterozygous (5A/6A and C/T, respectively) genotypes of MMP-3 and -9 showed significant association with brain abscess patients having predisposing factors. When comparison was made between culture positive and culture negative results, of MMP-1 2G/2G and MMP-9 T/T, C/T genotype showed significant association with culture positive patients

Conclusion. Polymorphism of MMP-1 1607 1G/2G, MMP-2: C-1306-T, MMP-3 -1171 5A/6A, and MMP-9 C-1562T polymorphisms lead to increased production of these molecules, which appear to be a risk for the development of brain abscess in North India population.

Disclosures. All authors: No reported disclosures.

1009. The Etiologies and Clinical Characteristics of Patients Hospitalized with an Acute Febrile Illness and Central Nervous System Syndromes in Indonesia
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Background. Acute febrile illness is a common reason for hospitalization in many developing countries, including Indonesia. While patients can often be categorized based on clinical presentations, diagnostic capacity in these countries remains limited, leading to poor patient outcomes. For patients with central nervous system (CNS) infections, identifying the underlying etiologies is particularly important to prevent lifelong neurological complications and death.

Methods. As part of a study conducted at 8 top-referral hospitals across Indonesia from 2013 to 2016, 114 of 1,486 enrolled subjects presented with an acute fever and a CNS syndrome. To identify the etiologies and clinical manifestations of these infections, as well as the management of febrile patients at the hospitals, demographic and clinical data were collected at enrollment, and blood samples