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**Background.** We present a rare case of *Scopulariopsis brumptii* endophthalmitis and discuss therapeutic strategies including systemic and intraocular anti-fungal therapy, and surgical intervention. The combination of highly resistant pathogen, unique sanctuary site, and vulnerable host makes this a challenging case.

**Methods.** We reviewed medical records of a patient who received HSCT for acute myelogenous leukemia and presented with acute right-sided eye pain and photophobia seven months posttransplant while on posaconazole prophylaxis.

**Results.** Ophthalmological examination showed pan-uveitis and vitritis. Skin examination was normal. Labs revealed leukopenia of 0.5 x 10^9/mL and (1,3)-β-d-glucan of 500 pg/mL. CT of chest and sinuses was unremarkable. Patient received intravitreal amphotericin B followed by voriconazole thrice weekly and oral posaconazole. Vitreous aspirate was negative for bacterial, mycobacterial, and fungal cultures and broad-range PCR. Susceptibility data demonstrated high minimal inhibitory concentrations (MICs) for posaconazole and voriconazole and low MICs for isavuconazole, amphotericin, and echinocandins. He was treated with 2 weeks of local and systemic amphotericin B therapy before developing acute kidney injury. He was then transitioned to isavuconazole. Intraocular injections were discontinued after 6 weeks when (1,3)-β-d-glucan was 46 pg/mL and resolution of retinal lesions. Patient was kept on isavuconazole chronic suppression.

**Conclusion.** *S. brumptii* is known for resistance to many antifungal agents. Our case highlights the importance of vitrectomy and intraocular drug injection due to poor penetration from systemic therapy. With aggressive local and systemic therapy and surgery, our patient had good outcome.

**Figure 1.** Funduscopic examination revealing retinal lesions.

**Figure 2.** *Scopulariopsis brumptii* microscopic appearance.

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**333. Meningitis in Well-Appearing Febrile Infants Aged 1–90 Days**

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**Background.** Fever in infants 1–90 days of age is common. Bacterial meningitis (BM) is a rare, potentially fatal infection that may occur in well-appearing febrile infants (FI). Our objectives were to identify infants with BM in a large population of well-appearing FI and evaluate factors associated with the diagnosis of BM in this population.

**Methods.** The Intermountain Healthcare System (IHS) is comprised of 22 hospitals across Utah and Idaho and includes Primary Children’s Hospital, the only pediatric hospital in a catchment area of 400,000 miles². IHS has a care process model for the well-appearing FI. We queried the IHS EHR from July 1, 2004 to September 30, 2016 and captured data on age, laboratory testing, and outcomes. Diagnosis of BM required positive CSF culture.

**Results.** We identified 21,135 FI episodes; 54 infants (0.26%) had a diagnosis of BM. Gram-negative organisms predominated in FI 1–28 days [15/24 (63%)] and caused 28/54 (52%) cases overall (Figure 1). FI 1–28 days were significantly more likely to have BM than those 29–90 days (0.41% vs. 0.20%; RR 2.11, 95% CI 1.24–3.61). Laboratory screening showed abnormal white blood cell count in 63% of FI 1–28 days with BM and 50% of FI 29–90 days (P = 0.42); bands were abnormal in 33% and 47% respectively (P = 0.41); urinalysis was abnormal in 21% and 11% (P = 0.42). CSF profile was performed and interpretable in 48/54 (89%); CSF pleocytosis was present in 30/48 (63%). Nine of 54 (17%) FI with BM would not have been considered “high-risk” based on laboratory criteria alone. Of FI with BM, only 31/54 (57%) had bacteremia with the same organism [17/24 (71%) in those 1–28 days; and 14/30 (47%) in those 29–90 days; P = 0.099].

**Conclusion.** BM is rare and challenging to predict in well-appearing FI. Abnormal screening laboratory values identified 83% of FI with BM. Awaiting blood culture results before performing lumbar puncture would potentially miss 40%. Age was the only predictor for BM risk in our cohort.

**Figure 1.** Pathogen Frequency by age (week).

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**334. Implementation of FilmArray Meningitis/Encephalitis Panel at a Tertiary Medical Center**

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**Background.** A rapid and accurate meningitis/encephalitis diagnostic test can have a significant clinical impact and improve utilization of antimicrobial agents. The

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**Disclosures.** A. J. Blaschke, BioFire Diagnostics, LLC: I have intellectual property licensed to BioFire through the University of Utah, Independent Contractor and Investigator, Consulting fee and Licensing agreement or royalty. C. L. Byington, BioFire Diagnostics, LLC: I have intellectual property licensed to BioFire through the University of Utah, Licensing agreement or royalty.
FilmArray Meningitis/Encephalitis Panel, a multiplex PCR meningitis/encephalitis panel (MEP) (bioMérieux, Marcy l'Etoile, France) requires only 200 µL of cerebral spinal fluid (CSF) and takes less than 1 hour to simultaneously detect 14 pathogens. The objective of the study was to evaluate the outcome of MEP at our medical center.

**Methods.** Retrospective review of 433 patients with an MEP performed from April 2017 to March 2018. Demographics characteristics, signs and symptoms, immune status, laboratory and radiology results and antibiotic use were collected.

**Results.** Twenty-nine unique patients with positive CSF samples (Table 1). The mean age was 41 years old with 55% female predominance. The most common presentations were headache (65%) and fever (38%). Patients with H. influenzae and Group B Streptococcus had positive blood culture (CX) but negative CSF CX. Both the CSF and the blood CX were negative for the patient with L. monocytogenes. MEP identified six Cryptococcus sp. with concurrent positive CSF CX and Cryptococcus antigen. However, three patients had positive Cryptococcus but MEP was negative. Only one of six patients with HHV-6 received treatment.

**Table 1. Pathogen Identified With FilmArray ME Panel**

| Pathogen Detected                  | # Positive MEP |
|------------------------------------|---------------|
| Human herpes virus-6 (HHV-6)*      | 6             |
| Cryptococcus gattii/neoformans*    |               |
| Enterovirus                         | 5             |
| Human simplex virus (HSV)-2        | 3             |
| Cytomegalovirus                    |               |
| Varicella zoster                    | 2             |
| HSV-1                              | 1             |
| Streptococcus agalactiae           | 1             |
| Haemophilus influenza               |               |
| Escherichia coli K1                | 1             |
| Listeria Monocytogenes             |               |
| Streptococcus pneumoniae           | 0             |
| Human parvovirus                   | 0             |
| Neisseria meningitidis             | 0             |

*One patient with Cryptococcus and HHV-6 co-infection

**Conclusion.** The FilmArray MEP can rapidly diagnose ME infections, help to target therapy and allow for discontinuation of unnecessary empiric agents.

**Disclosures.** R. Hashun, Biofire: Speaker's Bureau, Speaker honorarium. Biomerieux: Consultant, Consulting fee.

335. Missed and Delayed Diagnosis of Herpes Simplex Encephalitis in Inpatient and Ambulatory Care Settings

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**Background.** Herpes simplex encephalitis (HSE) is a severe, and often fatal, condition requiring timely diagnosis and treatment. Little is known about the frequency and factors associated with diagnostic delays.

**Methods.** We conducted a retrospective cohort study using the Truven Health Analytics Commercial Claims and Encounters Database from 2011 to 2016. We identified case visits where patients were first diagnosed with HSE. We analyzed visits prior to the index diagnosis for seizures, CSF WBC, hydrocephalus, and delay antibiotics therapy were associated with outcome.

**Results.** Our study cohort included 3,390 cases of HSE. There is a dramatic spike in visits with HSE-related symptoms that occurs just prior to the index HSE diagnosis (see figure). Prior to the index diagnosis we identified 2,459 visits, from 938 patients, that contained possible symptoms of HSE. We estimated that approximately 1,355 (CI 1,192–1,490) visits represented likely diagnostic delays with around 20% (CI 18.8–21.0) of patients experiencing at least one missed opportunity. The median duration of diagnostic delays, from first symptoms to diagnosis, was 6 days. Most diagnostic opportunities occurred in outpatient settings, 835 delays (CI 739–944), followed by emergency departments, 313 delays (CI 252–354), and inpatient settings, 259 (CI 226–291). Diagnostic opportunities involving seizures tended to occur earliest (median 7 days before HSE diagnosis), followed by headaches, neurologic symptoms, or changes in mental status (5 days), and finally fever (3 days). Patients with a history of three or more visits for chronic migraines, 90 days before HSE, were more likely to experience a diagnostic delay, OR 2.5 (CI 1.4–3.1), and experienced more diagnostic delays 0.8 vs 1.5 delays (P < 0.001).

**Conclusion.** There may be many missed diagnostic opportunities in both inpatient and ambulatory settings. Diagnostic opportunities tended to present with neurologic conditions before fever. Most opportunities occur in outpatient and emergency settings. Patients with a history of migraines may be more at risk for experiencing a delay.

336. Characteristics of Acute Bacterial Meningitis and Predictors of Mortality

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**Background.** Acute bacterial meningitis is a medical emergency associated with morbidity and mortality. The aim of the study was to describe clinical features, causative organisms and predictors of death among patients presented with community-acquired acute bacterial meningitis.

**Methods.** This retrospective study was conducted at Nakhonpathom Hospital, a 700-bed tertiary care hospital in Thailand during July 2013 and August 2017. The data on demographics, clinical presentation, and outcome were collected. Factors associated with death were analysed.

**Results.** During study period, there were 55 patients. Median age was 45 (range 19 to 89) years and 38 (69%) were male. Median duration of symptom before hospitalization were 2 (range 1 to 6) days. The most common presenting symptoms were fever (98%), headache (94%), and decreased level of consciousness (75%). The classic triad of fever, headache, and neck stiffness was documented in 53%. Computed tomography scan of brain were abnormal among 57% of 35 patients. Bacteria was isolated in CSF or blood in 40 patients (73%). The most common isolates were S. agalactiae (17 cases), S. pneumoniae (4 cases) and Streptococcus group D (4 cases). All isolates of S. agalactiae and S. pneumoniae were penicillin sensitive. The in-hospital mortality was 20%. Factors associated with death were age more than 65 years (44% vs. 13%, P = 0.047), low CSF WBC (178 vs. 439 cells/μL, P = 0.009), and the presence of hydrocephalus on imaging (67% vs. 9%, P = 0.047). The time interval between patients’ presentation and appropriate antibiotics administration differed significantly for patients who survive and die (22 vs. 0.5 hour, P = 0.016).

**Conclusion.** Acute bacterial meningitis remains associated with mortality. Age, CSF WBC, hydrocephalus, and delay antibiotics therapy were associated with outcome.

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337. The Use of Adjunctive Steroids in 438 Adults With Herpes Simplex Virus Encephalitis

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