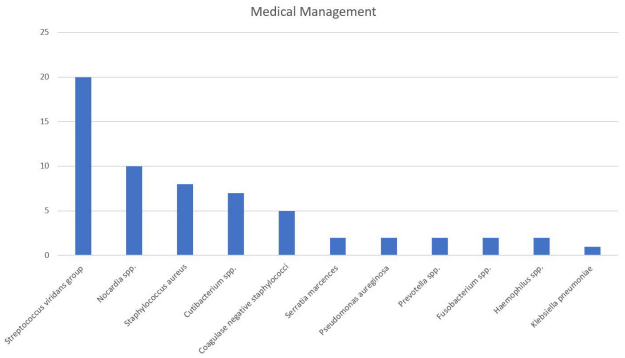
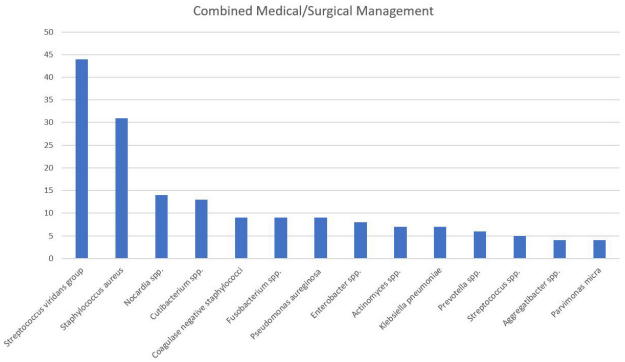
combined therapy (6.6% vs. 0.6%; P=0.005). The medical therapy group was more likely to have brain MRI and cranial CT than the patients with combined therapy (75.4% vs. 63.5%; P=0.041). Midline shift (11.5% vs. 31.2%; P=0.002), a single (21% vs. 83%; P=0.001) and greater size (1.4 cm vs. 2.5 cm; P=0.007) brain abscess was significant when comparing medical vs. surgically managed abscess. Stereotactic surgical technique was the preferred diagnostic approach for the medical group (65.6% vs. 46.5%; P=0.010), and excision/craniotomy for the combined group (31.1% vs. 53.5%; P=0.002). Streptococcus viridans group was the predominant organism (32.8% and 25.9%; P=0.30). Compared to those who received combined therapy, patients with medical therapy alone were most likely to receive cephalosporin (72.1% vs. 41.2%; P=< 0.0001), vancomycin (23% vs. 12.4%; P=0.047) and metronidazole (27.9% vs. 14.7%; P=0.022). In both groups, median duration of antimicrobial therapy was 42 days (P=0.12). Patients with medical therapy alone had a higher mortality rate (18% vs. 7.1%; p=0.014) but less neurologic sequelae (21.3% vs. 30.6%; P=0.16) compared with combined therapy.

Medical Management. Organism isolated in the medical management group



Combined Management. Organism isolated in the combined management group



Demographic and Clinical Characteristics of Patients with Brain Abscess who Underwent Therapeutic Management

Factor	Medical management (n=61)	Combined medical/surgical management (n=170)	P value[a, ¥]
Demographic characteristics			
Age at diagnosis of infection (y), median (IQR)	59 (49-65.5)	58 (44-67)	0.54
Male sex (No. [%])	42 (68.9)	109 (64.1)	0.50
White race (No. [%])	59 (96.7)	152 (89.4)	0.08
Comorbidities, n (%)			
None	7 (11.5)	16 (9.4)	0.64
Diabetes mellitus	14 (23)	42 (24.7)	0.78
Insulin-dependent	5 (8.2)	19 (11.2)	0.51
Chronic kidney disease	6 (9.8)	36 (21.2)	0.07
Hemodialysis	1 (1.6)	9 (5.3)	0.22
Infective endocarditis	4 (6.6)	1 (0.6)	**0.005**
Essential hypertension	15 (24.6)	51 (30)	0.42
Peripheral vascular disease	13 (21.3)	41 (24.1)	0.65
History of stroke	3 (4.9)	14 (8.2)	0.39
CNS disease other than stroke	14 (23)	22 (12.9)	0.06
Seizure	5 (8.2)	12 (7.1)	0.77
Traumatic brain injury	1 (1.6)	2 (1.2)	0.78
Arteriovenous malformation	1 (1.6)	2 (1.2)	0.78
Meningioma	4 (6.6)	4 (2.4)	0.12
Malignancy	18 (29.5)	61 (35.9)	0.36
Head and neck	10 (16.4)	35 (20.6)	0.47
Bone marrow transplant	2 (3.3)	5 (2.9)	0.89
Solid organ transplant	3 (4.9)	7 (4.1)	0.79
Immunosuppressive[¤] or Corticosteroid[β] therapy	15 (24.6)	26 (15.3)	0.10

Abbreviations: CNS, central nervous system; IQR, interquartile range; No., number

[¤]Calcineurin inhibitors, anti-proliferative agents, mammalian target of rapamycin inhibitor, monoclonal antibodies

[β]Prednisone (≥2.5 mg/day)

[a]Chi-Square, [¥]T-test.

Conclusion. Most patients with pyogenic brain abscess had no identified risk factors, and brain MRI and cranial CT were the diagnostic imaging modalities of choice. Compared to those who received medical therapy alone, patients with combined treatment had a single and greater size fluid collection with the presence of midline shift. A prompt combined surgical and medical approach with prolonged antimicrobial therapy can cure the infection.

Outcomes of Patients with Bacterial Brain Abscess

	Medical management, n=61	Combined medical/surgical management, n=170	P-value
Cured without permanent neurologic deficits, n (%)	28 (45.9)	76 (44.7)	0.87
Size*, cm, median (IQR)	1.6 (1-2.8)	1.6 (1-2.9)	0.88
Single*, n (%)	22	59	0.84
Cured with permanent neurologic deficits, n (%)	13 (21.3)	52 (30.6)	0.16
Hemiparesis	2	7	0.77
Hemiplegia	2	13	0.23
Seizure	7	28	0.35
Aphasia/dysarthria	1	2	0.78
Others[€]	1	2	0.78
Size*, cm, median (IQR)	2 (1-2.4)	2.3 (1.3-3.1)	0.29
Single*, n (%)	11	43	0.25
Failure			
Death	11 (18%)	12 (7.1%)	**0.014**
Relapse	7	24	0.60
Re-operation	2	6	0.92

Abbreviations: IQR, interquartile range; n, number.

[€]Hydrocephalus, persistent headache, dysphagia.

*Abscess.

Radiologic and Surgical Diagnosis of Patient with Brain Abscess who Underwent Therapeutic Management

Factor	Medical management (n=61)	Combined medical/surgical management (n=170)	P value[¤,β]
Imaging technique, n (%)			
Cranial CT	51 (83.6)	130 (76.5)	0.24
Brain MRI	56 (91.8)	148 (87.1)	0.32
Both	46 (75.4)	108 (63.5)	**0.041**
Anatomical location, n (%)			
Frontal lobe	31 (50.8)	78 (45.9)	0.50
Temporal lobe	13 (21.3)	50 (29.4)	0.22
Parietal lobe	14 (23)	48 (28.2)	0.42
Occipital lobe	8 (13.1)	20 (11.8)	0.78
Cerebellum and brainstem	6 (9.8)	17 (10)	0.97
Size*, cm, median (IQR)	1.4 (1-2.9)	2.5 (1-3)	**0.007**
Single*, n (%)	21 (34.4)	141 (83)	**0.001**
Midline shift, n (%)	7 (11.5)	53 (31.2)	**0.002**
Surgical diagnosis, n (%)			
Stereotactic	40 (65.6)	79 (46.5)	**0.010**
Excision/Craniotomy	19 (31.1)	91 (53.5)	**0.002**

Abbreviations: cm, centimeter; CT, computer tomography; IQR, interquartile range; MRI, magnetic resonance imaging; n, number.

*Abscess.

[¤]Chi-Square, [β]T-test.

Disclosures. **John C. O'Horo, Sr., MD, MPH**, **Bates College and Elsevier Inc** (Consultant) **M. Rizwan Sohail, MD**, **Medtronic Inc., Philips, and Aziyo Biologics, Inc** (Consultant) **M. Rizwan Sohail, MD**, Aziyo Biologics (Individual(s) Involved: Self): Consultant; Philips (Individual(s) Involved: Self): Consultant

268. Methicillin Sensitive Versus Methicillin Resistant *Staphylococcus aureus* Nosocomial Meningitis

Deniz Akyol, Doctor[1]; Selin Bardak özcem, n/a[2]; Sinan Mermer, n/a[2]; Şöhret Aydemir, n/a[2]; Tansu Yamazhan, Professor Doctor[3]; Bilgin Arda, MD[2]; Erkin Özgiray, n/a[2]; Taşkın Yurtseven, n/a[2]; Sercan Ulusoy, Professor Doctor[3]; Oğuz Reşat Sipahi, Professor Doctor[3]; [1]Doctor, İzmir, Izmir, Turkey; [2]Ege University Faculty of Medicine, İzmir, Izmir, Turkey; [3]Professor Doctor, Izmir, Izmir, Turkey

Session: P-13. CNS Infection

Background. Herein, we aimed to analyze the outcomes of the methicillin sensitive (MS) versus methicillin resistant (MR) culture-proven Staphylococcus spp. nosocomial meningitis (S-NM) in our setting.

Methods. We extracted data and outcomes for all adult patients (age >18 years) consulted by the Infectious Diseases Consultants and diagnosed NM (developed at a compatible time according to CDC nosocomial meningitis definitions) between January 2006 and 2021 and fulfilled the following study inclusion criteria: (a) Age ≥18-year-old; (b) CSF culture is positive for *Staphylococcus* spp. (c) Presence of at least two of three clinical/laboratory criteria as meningitis findings: (i) Body temperature >38°C;

(ii) CSF finding; >250 leucocytes/mm^3; (iii) at least one of the following clinical findings, ie. impairment of consciousness, neck stiffness, nausea/vomiting. Identification of the infecting bacteria and determination of antimicrobial susceptibility were performed using the VITEK 2 automated system (BioMerieux Inc, Mercy Lètoil, France) and conventional methods. Resistance to methicillin was tested by E-test (bioMérieux). Antibacterial susceptibility tests were evaluated according to Clinical Laboratory Standards Institute (CLSI) criteria until 2014 and EUCAST between 2015 and 2021. Chi-square and Student T tests were used for statistical comparison.

Results. A total of 9 patients in MSS-NM, 41 patients in MRS-NM group fulfilled the study inclusion criteria. Age, gender, and CSF findings (except CSF glucose was significantly lower in MSS-NM) were similar in both groups (Table 1). Besides, EOT clinical success and overall success (EOT success followed by one-month survival without relapse or reinfection) rates were similar (Table 1). Relapse and reinfection rates during post-treatment one month period were 0%-0% and 0%-6.6% in MSS/MRS-NM, respectively. In MRS-NM group reinfection pathogens were *Acinetobacter baumannii* and *Pseudomonas aeruginosa* after 12 and 30 days end of treatment.

Characteristics of NM

Characteristics	Methicillin sensitive (n:9)	Methicillin resistant (n:41)	p
Female	3	18	0.716
Age	48.55 +/- 12.9	51.43 +/- 13.14	0.553
Intracranial tumor	3	14	1
Intracranial haemorrhage	0	13	0.089
Hydrocephalus	3	18	0.716
Shunt	5	23	1
External ventricular drainage	0	8	0.321
Mean CSF leukocyte count	703.33 +/- 360	578 +/- 288.89	0.266
Mean CSF protein	180 +/- 114.55	445.71 +/- 1090.93	0.472
Mean CSF glucose	16 +/- 19.79	47.93 +/- 36.98	0.015
Day 3-5 microbiological success	5/9 (55.5%)	27/41 (65.8%)	0.704
EOT clinical success	9/9 (100%)	37/41 (90.2%)	1
Overall success	9/9 (100%)	35/41 (94.5%)	0.575

Conclusion. Overall success in MSS-NM was acceptable while it was non-significantly lower in MRS-NM. The medical community should seek better infection control measures from NM.

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

269. A Review of Gram Negative Endogenous Endophthalmitis at University Hospital in Newark

Hernando Salazar, MD[1]; Catherine Ye, BA, MBS[1]; Brian Schott, BS[1]; Kristin R. Riddle, BA[1]; Diana Finkel, DO[2]; [1]Rutgers New Jersey Medical School, Newark, New Jersey; [2]NJMS Rutgers University, Newark, NJ

Session: P-13. CNS Infection

Background. Endophthalmitis (EO) is an ocular emergency characterized by intraocular inflammation, usually in response to infection. While most cases are exogenous, gram negative (GN) EO account for 10-24% of all cases, and endogenous EO (EEO) account for 2-8% of all cases. Risk factors for EEO include diabetes mellitus (DM), IV drug use, and indwelling catheters. Major sources of infection are urinary tract infections (UTI), liver abscesses, pneumonia, and bacteremia. Common pathogens include K. pneumoniae, P. aeruginosa, and H. influenzae. Outcomes are poor, with only 20% of patients achieving improved visual acuity, and 30-40% requiring enucleation.

Methods. Retrospective analysis was performed on patients diagnosed with EO (n=89) at University Hospital in Newark from January 2016 to December 2020 using ICD-10 codes H44.0-H44.009, H44.1, and H44.19. Patients included were 18 years of age or older with culture proven GN endogenous EO (GNEEO) (n=7). Outcomes included anatomical success, functional success, and mortality at 28 days and 3 months.

Results. 7 of 89 patients met criteria for GNEEO (median age 67, 4 males, 71.4% Hispanic/Latino). Comorbidities included hepatobiliary disease (57.1%) and DM (42.9%). All 7 patients presented with ocular symptoms and 3 had non-ocular symptoms. Primary sources of infection included UTI, prostate abscess, and pneumonia/empyema. Eye cultures identified Pseudomonas in 4 patients and Klebsiella in 3 patients. Mean antibiotic length was 17.7 days with 6 patients receiving intravitreal antibiotics. Enucleation was performed in 3 patients. 2 patients had functional success and 4 had anatomical success, with 0 mortality at 28 days and 3 months.

Table 1. Ocular symptoms on presentation of cases of gram negative endogenous endophthalmitis

Ocular Symptoms on Presentation	
Symptom	**# of Patients**
Bilateral	1
Unilateral	6
Pain	6
Redness	4
Hypopyon	4
Decreased perception of light	4
Decreased visual acuity	2*
Uveitis	2
Retinitis	1
*not reported for 5 patients	

Table 2. Positives cultures obtained from cases of gram negative endogenous endophthalmitis

Positive Cultures	
Outcome	**# of Patients**
Eye cultures	7
Urine cultures	2
Blood cultures	1

Conclusion. Although rare, GNEEO causes significant morbidity, with only 2 recovering visual acuity and 3 requiring enucleation. Risk factors, sources of infection, and microbes were all consistent with those in previous reports. Hepatobiliary disease and DM were the most prominent risk factors while sources of infection included UTI and empyema. Eye cultures were positive for K. pneumoniae and P. aeruginosa, two common pathogens previously identified. This case series highlights the importance of prompt recognition and initial treatment of GNEEO with empiric coverage that includes vancomycin and ceftazidime.

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

270. New Onset Seizure Presented as Neurosyphilis

Shwe S. Phyo, MS[1]; Cho T. Zin, MD[2]; Zeyar Thet, MD[3]; [1]Kings County Infectious Disease, Brooklyn, New York; [2]Kings County Infectious Disease Clinic PC, Brooklyn, New York; [3]Wyckoff Heights Medical Center, Brooklyn, New York

Session: P-13. CNS Infection

Background. The term "neurosyphilis" refers to infection of the central nervous system (CNS) by *Treponema pallidum*. It can occur at any time after initial infection. Early in the course of syphilis, the most common forms of neurosyphilis involve the cerebrospinal fluid (CSF), meninges, and vasculature (asymptomatic meningitis, symptomatic meningitis, and meningovascular disease). Late in disease, the most common forms involve the brain and spinal cord parenchyma (general paralysis of the insane and tabes dorsalis).

Methods. A 31-year-old man who suddenly developed a new onset generalized tonic clonic seizure, was admitted to the emergency department. He had no history of epilepsy and denied any vision or gait problems. The brain MRI showed no abnormalities. He had a history of rapid plasma reagent (RPR) titer 1:32 and a positive fluorescent treponemal antibody absorption (FTA-ABS) test in 2017. However, the RPR result was non-reactive when he retested a week later and therefore was not diagnosed with syphilis and did not get treated at that time. His most recent RPR titer was 1:16. HIV serology and other STD tests were all negative. His wife and his 3 kids were negative for syphilis. Due to serological evidence of syphilis and neurological symptoms, we arranged him to get a lumbar puncture to rule out neurosyphilis.

Results. His CSF study showed positive venereal disease research laboratory (VDRL), WBC cell count 44 cells/ul (lymphocytes 80%, Neutrophil 20%), Glucose 50 mg/dl, Protein 75 mg/dl. Based on the CSF study, he was diagnosed with neurosyphilis and was treated with intravenous Penicillin G 3-4 million units every 4 hours for 14 days, followed by Benzathine Penicillin 2.4million units intramuscularly on day 21.

Conclusion. This is an unusual case because his false negative RPR result has hindered the prompt diagnosis and management of syphilis. RPR is a nontreponemal test and therefore it is not always reliable as a diagnostic criteria. False negatives in RPR may occur in certain conditions such as in early primary or in late stage syphilis and prozone phenomenon. This case illustrates the importance of using a reverse sequence algorithm in diagnosing syphilis. Thorough history taking is also crucial in conjunction with serological tests to determine the diagnosis and to ensure appropriate treatment.