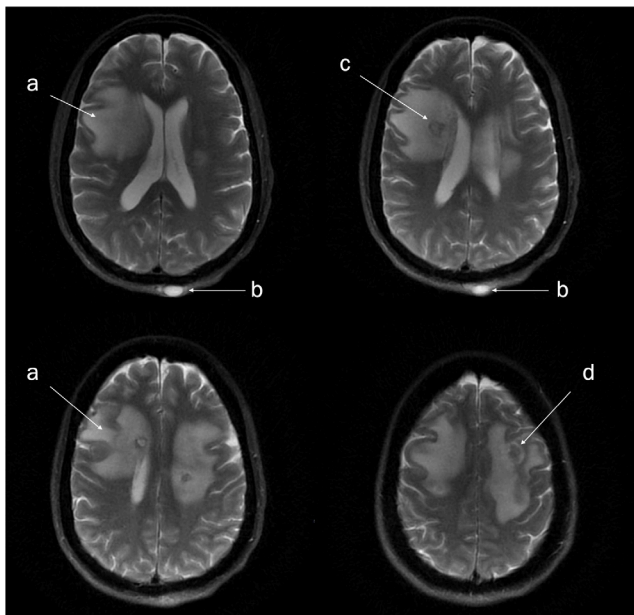


main categories: pulmonary nocardiosis, disseminated nocardiosis, and cutaneous nocardiosis.

Methods. We present a case of cerebral nocardiosis in an immunocompetent patient caused by *Nocardia beijingensis* (NB).

Results. A 60-year-old Caucasian lady from Florida with type 2 diabetes mellitus, hypertension, hyperlipidemia, presented to the emergency room with complaints of altered mentation. Per husband, she was having episodes of emesis and diarrhea 3 days prior to admission that resolved however, her mentation significantly deteriorated to where she was unable to perform simple chores around the house. Pertinently she had resection of lung mass 2 months prior to admission which found to be benign. Vital sign at admission was stable and on examination, the patient was alert and oriented, however, lethargic appearing. Neurological examination was pertinent for expressive aphasia; however, cranial nerves II-XII were grossly intact. The patient was also found to have a 3 cm by 4 cm, tender, cystic lesion on the left-sided occipital scalp. The remainder of the physical examination was unremarkable. Admission laboratories were remarkable for leukocytosis and hyperglycemia. MRI of the brain was completed that showed multiple areas of vasogenic edema and multiple nodules with the largest being 1.8 cm suggestive of abscesses. She was started empirically on vancomycin, ceftriaxone, metronidazole, and ampicillin. Cerebral spinal fluid showed neutrophilic pleocytosis, low glucose, and high protein. Initial cultures including CSF were negative. Left-sided occipital scalp lesion was excised and sent for pathology and culture. Initial cultures showed gram-positive bacilli, so antibiotics were de-escalated to sulfamethoxazole/trimethoprim and ceftriaxone. Repeat imaging showed improving abscess, and final cultures resulted in NB.

Conclusion. NB is believed to have originated in Southeast Asia. NB has been associated mainly with infections in immunocompromised. In the United States, the two only other cases of NB described in immunocompetent hosts were interestingly from Florida as well.



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1417. Detection of Human Herpesviruses DNA in Cerebrospinal Fluids of Patients Suspected with Central Nervous System Infection

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Background. Of the nine human herpesviruses (HHVs), most viruses have neurovirulence. Clinical manifestations of central nervous system (CNS) complications caused by some of the HHVs are well examined in children and immunocompromised adults; however, information of EBV and β -herpesviruses in an immunocompetent adult is limited.

Methods. Between April 2013 and March 2018, 322 patients (median age; 51.6 years old, male/female; 196/126) suspected to CNS infection were enrolled in this study. Patients with unconsciousness or characteristic change lasting more than 24 hours and abnormal brain MRI or EEG were defined as encephalitis. Real-time PCRs for detection of the 7 HHVs DNA including HSV-1, HSV-2, VZV, CMV, EBV,

HHV-6, and HHV-7 were carried out in DNA extracted from 200 μ L CSF. HHV-6 was discriminated between HHV-6A and HHV-6B using RFLP analysis.

Results. Herpesviruses DNA was detected in 33 (10.2%) of the 322 patients. The most frequently detected HHVs was VZV (19 cases) and followed by HHV-6B (4 cases), HSV-1 (3 cases), HSV-2 (3 cases), and EBV (2 cases). Multiple HHVs DNAs were detected from the 2 patients (case A; HSV-2, HHV-6, and EBV, case B; EBV and HHV-6B). No CMV and HHV-7 DNAs were detected in any of the samples. Eleven cases were assigned as encephalitis, and other 22 cases were non-encephalitis. Although all 3 patients with positive HSV-1 DNA were encephalitis, all 3 patients with positive HSV-2 DNA were meningitis. Fourteen (13 patients had zoster) of the 19 patients with positive VZV DNA were meningitis, and the remaining 5 patients (4 patients had zoster) were encephalitis. Two of the 4 HHV-6B-positive patients were non-encephalitis, one patient was diagnosed Orbital apex syndrome and another patient was myelitis. One of the 2 encephalitis patient was chromosomally integrated (ci) HHV-6. Additionally, case B was also ciHHV-6.

Conclusion. Approximately 10% of the samples were positive of HHVs DNA. VZV was the most frequently detected viral DNA in this cohort. Thirty-three percent of the patients were encephalitis, remaining patients were non-encephalitis such as meningitis and myelitis. As suggested, ciHHV-6 can cause miss-diagnosis of patients suspected with CNS infection.

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1418. Clinical Characteristics of Vertebral Osteomyelitis in Cancer Patients

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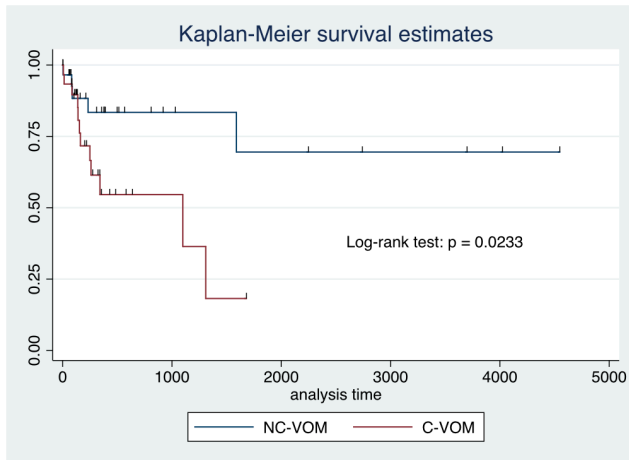
Background. Vertebral osteomyelitis (VOM) is an infection of vertebrae or intervertebral disc and associated with high mortality, decreased functional status, prolonged antibiotic use and recurrent infection. Although most of the patients with VOM often embody immunodeficiency or other comorbidities, characteristics of VOM in cancer patients remain to be fully elucidated. The aim of this study was to describe clinical profile, underlying disease, lesion site, pathogen, comorbidities, treatment, and outcome in patients with cancer.

Methods. This study was a retrospective observational study in a tertiary care cancer hospital with 801 beds. All patients with VOM were diagnosed by computed tomography or magnetic resonance imaging from July 2004 to March 2019. Culture-confirmed VOM was defined when causative pathogens were identified from the lesion site including vertebra, intervertebral disc, paravertebral or epidural abscess or when the result of blood culture was positive with compatible clinical symptoms. Data including patient characteristics, underlying diseases, lesion sites, type of infection, entry site of infection, results of bacterial culture, treatment, and outcome were collected by electronic medical records. We analyzed data of patients with culture-confirmed VOM between patients with cancer (C-VOM) and patients without cancer (NC-VOM). Death or re-treatment was the primary outcome. Statistical analysis was performed by STATA Version 15.

Results. Total number of patients diagnosed with VOM was 101, of which culture-confirmed VOM was 61 (C-VOM: 30 and NC-VOM: 31). Age, lesion sites, pathogen, or comorbidities were not significantly different between two groups (table). On the other hand, the rate of contiguous infection in C-VOM was significantly higher than NC-VOM (20.0 % vs. 0.0 %; $P = 0.01$). Univariate cox proportional hazard model revealed that cancer was risk of death or re-treatment (HR:3.14, 95% CI:1.07–9.24).

Conclusion. Poor prognosis and contiguous infection from adjacent infection sites should be concerned cancer patients with culture-confirmed VOM.

		C-VOM	NC-VOM
Age	Median (range)	76 (48-92)	71 (36-87)
Male sex		66.7%	38.7%
Lesion site	Cervical	6.5%	16.7%
	Thoracic	22.6%	10.0%
	Lumber	64.5%	73.3%
	Multiple site	6.5%	0.0%
Type of infection	Hematogenous	87.1%	63.3%
	Contiguous	0.0%	16.7%
	Surgery/Trauma	6.5%	6.7%
	Unknown	6.5%	13.3%
Primary entry	Catheter related blood stream infection	13.3%	3.2%
	Skin and soft tissue infection	10.0%	25.8%
	Urinary Tract Infection	13.3%	9.7%
	Pneumonia	3.3%	0.0%
	Cholangitis/Liver abscess	3.3%	3.2%
	Others	26.7%	19.4%
	Unknown	38.7%	30.0%
Pathogen	Methicillin-sensitive <i>Staphylococcus aureus</i>	19.4%	16.7%
	Methicillin-resistant <i>Staphylococcus aureus</i>	6.5%	13.3%
	Methicillin-sensitive Coagulase negative <i>Staphylococcus</i>	6.5%	3.3%
	Methicillin-resistant Coagulase negative <i>Staphylococcus</i>	6.5%	6.7%
	<i>Streptococcus</i> species	25.8%	33.3%
	<i>Enterococcus</i> species	6.5%	3.3%
	Gram negative bacteria	22.6%	26.7%
	Polymicrobial	3.2%	10.0%
	Others	9.7%	10.0%



Disclosures. All authors: No reported disclosures.

1419. A Rare Case of *Clostridium beijerinckii* Traumatic Osteomyelitis

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Background. We present a case of *Clostridium beijerinckii* osteomyelitis in the presence of retained foreign bodies not seen on MRI.

Methods. A 45-year-old female with type 2 diabetes sustained multiple open right leg injuries, grossly contaminated with gravel, after a motor vehicle collision. She underwent external fixation (ex-fix) and 5 irrigations and debridements (I&D) initially. Polymicrobial intraoperative cultures (Cx) were treated with vancomycin and ertapenem for 6 weeks. One month post-antibiotic completion, pain, and swelling developed in ankle; contrast MRI revealed avascular necrosis and osteomyelitis (OM) of talus. Cx from repeat I&D grew same organisms; meropenem was recommended for 6 weeks. During meropenem week 6, pain was minimal and wound was closed. During attempt to implant hardware, pus was seen around peroneal tendon. Cx grew *Clostridium* species and *Bacteroides* from tibia, calcaneus, talus, and peroneal tendon sheath; meropenem was continued. Pain worsened 3 weeks later; I&D revealed pus in lateral ankle. To better access the medial ankle, a longitudinal incision was made along posterior tibial tendon, perpendicular to prior surgical incision. Immediate purulence, grass blades, and rocks were seen. Brucella agar had a rare gray colony at 48 hours and was subbed to blood and Brucella agar; it grew on Brucella agar with aero tolerance test. Gram stain showed Gram-positive rods with subterminal spores. Rapid ANA panel identified isolate as *Clostridium beijerinckii* (Cb) with > 99.9% probability and bioscore 1/24.

Results. Cb is a strict anaerobic gram-positive rod with oval subterminal spores. Found in soil and water, its main use is industrial solvent production. Infection by Cb is rare; only 2 cases of OM, 1 traumatic endophthalmitis, and 1 mitral valve endocarditis have been reported. While uncommon, Clostridial osteomyelitis is associated with contaminated open traumatic injuries. It can be difficult to eradicate, despite aggressive surgical intervention and appropriate antibiotics.

Conclusion. This is the third case of Cb OM described. Anaerobic cultures should be collected during I&D of open traumatic wounds. If infection persists, careful intraoperative evaluation of wound for residual foreign bodies, even if not seen radiologically, should be performed.

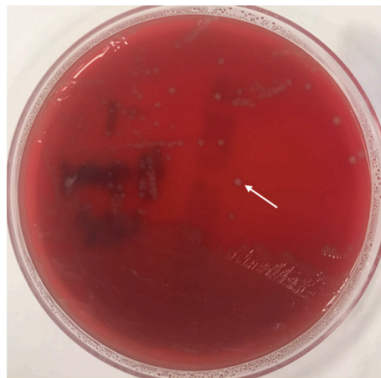


Figure 1. Grown on Brucella agar at 48 hours, colonies of *Clostridium beijerinckii* are circular and gray in color (white arrow). They have a slightly shiny appearance and somewhat raised.

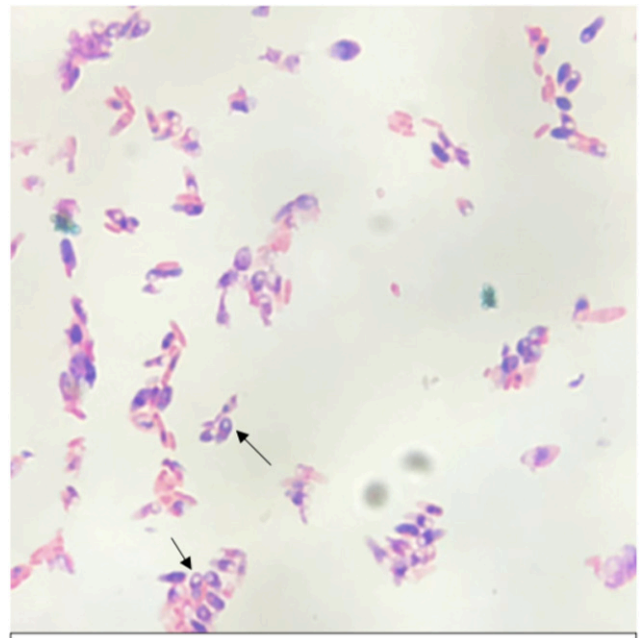


Figure 2. This gram stain shows a gram positive rod, which shows sub-terminal spores (black arrows), causing slight swelling of the cell.

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1420. Successful Treatment of Acute Osteomyelitis with Once-Weekly Oritavancin

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Background. Osteomyelitis is a complex infection with high morbidity and without standard treatment guidelines. Intravenous therapy is the standard of care, often requiring multiple daily antibiotic doses in an infusion center or home setting. Many of these infections are gram-positive and therefore are commonly treated with vancomycin or daptomycin. Oritavancin, a lipoglycopeptide antibiotic was FDA-approved in 2014 as a single dose regimen for treatment of ABSSSI and may be useful for the treatment of osteomyelitis where once-weekly therapy presents logistical advantages over vancomycin.

Methods. This was a retrospective case series of patients treated with four to six weekly doses of oritavancin at 20 infusion centers in 6 states under the care of 37 infectious diseases physicians. Patients were administered oritavancin between January 1, 2016 and December 31, 2018. Post therapy evaluation was completed by an ID PharmD utilizing a standardized set of questions. This study has been approved by an IRB.

Results. One-hundred 34 patients received oritavancin during the study period, all for acute osteomyelitis. All patients received baseline diagnostic imaging with MRI, along with clinical evaluation from a Metro Infectious Disease Consultants physician throughout their care. Cultures showing staph aureus, either MSSA or MRSA, were present in 120/134 (89.5%) of patients with MRSA encompassing the majority of patients 96/120 (80%). Patients were dosed with 1200 mg initially, and 800 mg weekly thereafter. At the end of therapy, clinical cure or improvement was achieved in one-hundred eighteen patients (88%). Follow-up was obtained through phone calls with all patients at 3 months and 6 months post-therapy in one-hundred thirty patients. Persistent or relapsing infection was diagnosed in patients 13/120 patients (10.8%). Nine patients were readmitted, but none for osteomyelitis or adverse drug reactions. Adverse reactions were reported in 5 patients (3.7%) including hypoglycemia (3) and tachycardia (2) in which 2 went to the emergency room, but were not admitted.

Conclusion. The use of oritavancin for gram-positive infections resulted in clinical cure or improvement in the majority of patients treated, offering a convenient and effective therapeutic option for the treatment of osteomyelitis.

Disclosures. All authors: No reported disclosures.

1421. Microbiology and Resistance of Diabetic Foot Osteomyelitis in a Teaching Hospital in Santiago, Chile

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