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WFN15-1217
CNS Infections 2
Safety and efficacy of intrathecal antibiotics in refractory CNS infections

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Refractory CNS infections often require intrathecal antibiotics but the safety of this practice has not been determined. We hereby describe our experience with intrathecal antibiotics in a series of patients admitted to a neurologic intensive care unit at a university center.
Methods: Retrospective case series of all patients with refractory CNS infections admitted to a neurosciences ICU at a university hospital over 7 years. The following data were abstracted from the medical records: demographics, diagnosis, type of infection, organism, antibiotic used, time to negative cultures, and complications associated with intrathecal antibiotics.
Results: A total of 26 patients were treated 12 (44%) male. Median age was 54 years old. The most common diagnosis was subarachnoid hemorrhage in 10/26 (38%), followed by brain tumors 6/26 (23%), intracranial hemorrhage 3/26 (12%), shunt infection 3/26 (12%), traumatic brain injury 2/26 (7%), primary meningitis and cerebral cyst 1/26 (4%) each. The most common organisms were gram negatives in 14 /26 (54%, gram positives in 6 /26 (23%), and coagulase negative staphylococcus in 6/26 (23%). The median time to CSF culture sterility was 8 days (range1-14). The antibiotics used were vancomycin in 10/26 (38%), gentamicin in 15/26 (58%), and amikacin in 1/26 (4%). No immediate complications occurred.
Conclusions: Intra-thecal administration of antibiotics in patients with refractory CNS infections appears to be safe and appears to be effective at achieving CSF sterility.

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CNS Infections 2
Fatal PML in a patient treated with compounded dimethyl fumarate with only modest lymphocytopenia

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Background: Since the 1950s fumaric acid esters (FAEs) have been used to treat psoriasis and in 2013 dimethyl fumarate (DMF) was approved as treatment for multiple sclerosis. FAEs have immunomodulatory and immunosuppressive effects and although they lead to a reduction of peripheral blood lymphocyte counts, opportunistic infections appear to be very rare. However, since 2013 several cases of progressive multifocal leukoencephalopathy (PML) were reported in patients with sustained and severe lymphocytopenia. Recently, two PML cases without severe lymphocytopenia were also reported.
Objective: Present the case of a psoriasis patient with PML after two years treatment with Psorinovo (DMF compounding pharmacy, Mierlo-Hout, the Netherlands). (Nieuwkamp et al, NJEM 2015; 372:1474-1476)
Patients and methods: In June 2012 a 64 year old Dutch woman with psoriasis started treatment with Psorinovo 240 mg t.i.d. Since July 2013 the dose was reduced to 240 mg b.i.d. She received no other systemic immunosuppressive treatment and was seronegative for HIV. During the treatment period, her total leukocyte counts remained within normal range.
Results: In July 2014 the patient developed progressive apraxia. Due to atypical CT and MRI imaging findings, no history of leukocytopenia and negative JC virus PCR in CSF, PML was rejected and the diagnosis of atypical ischemic stroke was made and Psorinovo was stopped. Her condition continued to deteriorate and MRI images were suggestive of PML-IRIS. Posthumously the diagnosis PML was established by PCR and immunohistochemistry.
Conclusion: Physicians should be alert for PML in patients treated with FAEs, both in lymphocytopenic and non-lymphocytopenic patients.

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CNS Infections 2
Guillain-Barré syndrome in the course of dengue

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A case report of a man, white, 39-year-old Brazilian with clinical picture of myalgia, fever and macular rash. He was diagnosed as having dengue, based on clinical manifestations and specific IgM titres.

Ten days after the first symptoms of dengue, the patient developed muscle weakness, followed by tetraplegia and respiratory failure. Electromyography with electrical data demyelinating neuropathy and the cerebrospinal fluid associated with albuminocytologic dissociation. These neurologic findings were consistent with a diagnosis of Guillain-Barré.-polyneuropathy acute inflammatory syndrome, the patient was treated with immunoglobulin and metylprednisolone.

Mechanical ventilation was initiated after admission and maintained for 21 days. After 30 days of hospitalization he left the hospital with muscle weakness and loss of patellar and ankle reflexes.

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