

## **LISTERIAL RHOMBENCEPHALITIS IN A YOUNG ADULT**

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**Background and Significance:** Listeria infection represents only a small minority among cases of meningitis or meningoencephalitis, and it is more likely at extreme ages, in patients with underlying diseases, and in immunosuppressed adults. Listerial rhombencephalitis is a rare and severe infection of the brainstem that is reported to have high mortality and frequent serious sequelae for survivors. We report the case of a 25-year-old immunocompetent male who presented with listerial brainstem infection due to *Listeria monocytogenes*.

**Case:** A 25-year-old female was admitted to our emergency room with fever, headache, diplopia and unsteady gait for two days previously. On initial neurological examination, there were generalized weakness and bilateral 6th nerve palsy. Cerebrospinal fluid examination revealed lymphocyte dominant pleocytosis of 140 cells/mm<sup>3</sup>. The patient was hospitalized with a preliminary diagnosis of viral meningoencephalitis. On the 2nd days of hospitalization, initial brain MRI showed gross upper pons involvement and *Listeria monocytogenes* was identified in one of three blood cultures.

**Conclusion:** Listerial rhombencephalitis is a rare and probably underrecognized condition which is lethal unless early and adequately treated. Overall mortality is 51% for listerial brainstem encephalitis. In conclusion, early empirical treatment with appropriate antibiotics is crucial for the favorable outcome of listerial brainstem encephalitis. However, this syndrome can be misdiagnosed at an early stage of the disease. Listeria should be kept in mind, especially in immunocompetent or immunosuppressed adult patients who develop fever, asymmetrical multiple cranial nerve palsies and focal neurological symptoms localized to the brainstem.