The Treatment of North American Lyme Neuroborreliosis (LNB) with Oral Antibiotics and Intravenous (IV) Ceftriaxone: a comparative case series

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Abstract:
Background: IV antibiotics are the current standard of treatment for LNB. Intravenous controlled data in Europe demonstrated non-inferiority of oral antibiotics to IV antibiotics. To date, no trials have been done in the U.S. We aim to compare the efficacy of oral antibiotics to IV antibiotics in the treatment of LNB.

Methods: We included patients diagnosed with LNB from 2013 to 2017. IV ceftriaxone was used as a reference standard. We compared the efficacy of oral antibiotics to IV antibiotics. Primary outcome measures were objective improvement of neuroimaging, MRI findings, or CSF analysis within 4 weeks.

Results: 19 patients met inclusion criteria. 11 received oral antibiotic therapy and 8 were treated with IV antibiotics. The most common symptoms were cranial neuropathies (46%), headache (42%), and constitutional symptoms (21%). The most common CSF abnormalities were neutrophilic pleocytosis (58%). All but one patient showed improvement in primary outcome measures.

Conclusion: This pilot study can be used as a basis for a larger prospective randomized trial, one that never been done one the U.S.

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