

Steroid use linked to worse outcomes in Lyme disease-associated facial paralysis

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Researchers from Massachusetts Eye and Ear/Harvard Medical School have found that patients who were prescribed corticosteroids as part of treatment for Lyme disease-associated facial paralysis had worse long-term outcomes of regaining facial function than those who were prescribed antibiotic therapy alone. Based on these findings, which were published online today in *Laryngoscope*, the researchers urge caution in prescribing corticosteroids to patients with acute Lyme disease-associated facial paralysis.

"While further study is needed to determine the effect of [corticosteroids](#) in the setting of acute Lyme disease-associated [facial paralysis](#), this retrospective study demonstrated a clear association between their use and worse long-term facial outcomes", said lead author Nate Jowett, M.D., FRCSC, a facial plastic and reconstructive surgeon at Massachusetts Eye and Ear and an Instructor in Otolaryngology at Harvard Medical School. "Since corticosteroids are part of the standard of care for acute viral facial paralysis, it is not surprising that they were initially prescribed to roughly two-thirds of the [patients](#) with Lyme disease-associated facial paralysis in this study. Our findings underline the importance of differentiating patients with facial weakness due to Lyme disease—for whom the standard of care is prompt antibiotic therapy—from those with acute viral facial paralysis, such as Bell's palsy or varicella-zoster virus—for whom the standard of care includes early treatment with corticosteroids and antivirals."

Lyme disease is the most common vector-borne human illness in the

Northern hemisphere, with an estimated 300,000 Americans infected each year, and a confirmed incidence of 60 cases per 100,000 residents in New England each year. Facial paralysis, a temporary loss of the ability to move the [facial muscles](#) on one or both sides, is a common manifestation of the disease. While most patients will recover normal facial function over the weeks to months following the initial paralysis, some will develop cross-wiring of nerve cells as they regenerate resulting in permanent incoordination of facial movements known as synkinesis on the involved side of the face.

In the largest study of its kind, the researchers studied the long-term recovery (an average of 15 months) of 51 patients with Lyme disease-associated facial paralysis who sought follow-up care in the Facial Nerve Center at Mass. Eye and Ear. Patients were grouped into those who were previously treated with triple therapy (antibiotics, antivirals and corticosteroids), double therapy (antibiotics and corticosteroids), or antibiotics alone to determine whether differences in long-term facial function outcomes might exist between groups.

Using validated, standardized tests for measuring the outcomes of patients with facial paralysis, experts who were naïve to the treatment patients received studied video documentation of a standardized sequence of facial expressions for each patient. Comparison of facial function scores between groups demonstrated statistically worse outcomes for those who received corticosteroids as part of their initial treatment.

"Considering that no prior research has conclusively demonstrated benefit of corticosteroid therapy for any manifestation of Lyme disease, including neurologic, rheumatologic or cardiac manifestations, we urge strong caution in prescribing corticosteroids in cases where facial paralysis is clearly the result of acute Lyme disease until better evidence is available," said Dr. Jowett. "Appropriate antibiotic therapy should be

promptly initiated in all cases."

More information: Nate Jowett et al, Steroid use in Lyme disease-associated facial palsy is associated with worse long-term outcomes, *The Laryngoscope* (2016). [DOI: 10.1002/lary.26273](https://doi.org/10.1002/lary.26273)

Provided by Massachusetts Eye and Ear Infirmary

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