

Steroids harmful to patients with Bell's palsy caused by Lyme disease

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The series by Wormser and colleagues, [published in the journal *Diagnostic Microbiology and Infectious Disease*](#) examines the success of treatment after long-term follow-up with eleven patients. [1] All of the patients with LDFP received corticosteroids, in addition to antibiotics.

The authors found that 6 of the 11 patients (54.5%) suffered from facial nerve dysfunction an average of 13.1 months following the onset of treatment with corticosteroids. Dysfunction was defined as having residual facial muscle weakness, synkinesis, facial tightness and discomfort, facial muscle hypertonicity, restriction of facial movements, and gustatory epiphoria (Bogorad's syndrome).

Synkinesia is a complication of facial paralysis. "Patients experience hypertonic contractures and synkinetic movements such as eye closure with volitional movement of the mouth or midfacial movement during volitional or reflexive eye closure," Husseman explains in the journal *Facial Plastic Surgery*. [2] "Synkinesis can cause functional limitation with activities such as eating, drinking, smiling, and may even lead to social isolation."

Some patients with Bell's palsy suffer from Bogorad's syndrome, also known as Gusto-lacrimation, or "crocodile tear syndrome." [3] Patients with this condition will have tearing of the eye while eating.

The 6 patients who continued to have facial nerve dysfunction included:

- 52-year-old man with "tearing of left eye when eating (Bogorad's syndrome); mild residual weakness left side."
- 51-year-old man with "mild residual left sided weakness; dryness left eye; after speaking a lot, left sided facial muscles feel abnormal."
- 56-year-old man with "narrowed palpebral fissure right eye; dry mouth; sensation of muscles around right eye being squeezed; tearing of right eye; twitching of the area between the eyes on the forehead; new dimple right cheek; intermittent lisp."
- 25-year-old man with "narrowed palpebral fissure left eye; reduced forehead movement; right sided jaw discomfort with eating; tearing of the left eye when eating (Bogorad's syndrome)."
- 61-year-old man with "narrowed palpebral fissure right eye; difficulty whistling; right eye discharge at night."
- 70-year-old woman who had "surgical facial nerve decompression nearly 3 months after onset of the LDFP."

Children can also present with long-term complications from facial palsy caused by Lyme disease. On follow-up, one study found 4 out of 11 children (36.4%) with LDFP who had residual facial nerve

dysfunction had synkinesis, explains Wormser.

The duration of antibiotic treatment was short. Patients were typically prescribed 14-28 days of doxycycline. Two children were treated with an oral beta-lactam antibiotic. The study was not designed to determine whether additional antibiotics would have been helpful.

The study raises concerns for those suffering from facial palsy triggered by Lyme disease who are treated with corticosteroids. "The principal finding in this study is that a high proportion of corticosteroid-treated patients suffered sequelae when evaluated at approximately 1 year of follow-up," writes Wormser.

"Although corticosteroids are frequently prescribed for LDFP," he writes, "the efficacy of this therapy has not been established."

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References:

1. Wormser GP, McKenna D, Scavarda C, Karmen C. Outcome of facial palsy from Lyme disease in prospectively followed patients who had received corticosteroids. *Diagn Microbiol Infect Dis*. 2018.
2. Husseman J, Mehta RP. Management of synkinesis. *Facial Plast Surg*. 2008;24(2):242-249.
3. McCoy FJ, Goodman RC. The crocodile tear syndrome. *Plast Reconstr Surg*. 1979;63(1):58-62.

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