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Treatment of benign essential blepharospasm and hemifacial spasm with lacosamide

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Objective: We present a series of six patients with benign essential blepharospasm and hemifacial spasm treated with the anticonvulsant, lacosamide. Lacosamide has a low toxicity profile and novel mode of action. It is known to enhance slow inactivation of voltage-sensitive sodium channels, stabilizing neuronal membranes to inhibit receptive firing.

Background: Benign essential blepharospasm (BEB) is a syndrome characterized by excessive or continuous bilateral eyelid closure due to spasm of the orbicularis oculi and adjacent muscles. BEB is considered a form of focal dystonia caused by basal ganglia dysfunction. Brain imaging and electrophysiologic studies suggest additional pathologic changes in excitability in the anterior cingulate, primary and secondary motor areas.² BEB is typically a chronic disorder.³ Botulinum neurotoxin is the medical therapy of choice in BEB and hemifacial spasm (HFS). However, the therapeutic effect is sometimes insufficient and repeated botulinum neurotoxin injections are often required. Recurrent botulinum injections are associated with high costs and the potential for denervation of the injected muscles. Thus, there is a need for other treatment options.

Design methods: The six patients presented to a private neurology practice for treatment of HFS or BEB. All six were currently being treated with botulinum toxin A injections. A trial of off label therapy with lacosamide was initiated on these six patients.

Results: Ongoing treatment with lacosamide ranges from six months to 2.5 years duration. Lacosamide doses used range between 50 mgs BID to 250 mg BID with no or only mild side effects. All patients have had significant improvement in their BEB or HFS with lacosamide therapy. Fewer botulinum toxin A units were required with each injection and greater symptom relief with the injections were reported by these patients. Symptom relief for as long as three months has been reported. Not only has the cost of therapy been reduced, the patients have been able to decrease the number of painful botulinum toxin A treatments.

Conclusions: This is the first report of use of lacosamide for the successful treatment of BEB and HFS. Lacosamide is a safe and effective alternative or adjunct therapy to botulinum injection in our patients with moderate to severe BEB or HFS. Lacosamide demonstrates a safe benefit to toxicity ratio and was associated with only minor side effects in these patients. Lacosamide appears to be an excellent adjunctive therapy for BEB and HFS.

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