

SIALORRHEA CAN AND SHOULD BE TREATED WITH BOTULINUM TOXIN: CONTRA

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Sialorrhea is defined as an increase in salivary flow that can be chronic or episodic. Sialorrhea or drooling is a serious medical and social problem. This condition may be a result of hypersecretion (primary sialorrhea) of the salivary glands but more commonly is due to impaired coordination of swallowing that leads to an overflow of saliva from the mouth (secondary sialorrhea). The pathophysiology of sialorrhea is multifactorial. The salivary glands (parotid, submandibular, sublingual glands) are innervated by both parasympathetic and sympathetic nerves. The glands secrete an average of 1 to 1.5 l of saliva per day.

Sialorrhea are common in many neurological or systemic disorders such as Parkinson's disease (PD), motor neuron disease, cerebral palsy and stroke. Excessive drooling and impaired swallowing of saliva increase the risk of aspiration pneumonia and can lead to choking. The prevalence rate for all patients with sialorrhea is unknown. About 70% of PD patients and up to 20% of patients with amyotrophic lateral sclerosis suffer from drooling. Primary sialorrhea is rare. The diagnosis of sialorrhea is a clinical one based on the patient's history and physical exam. The successful management of sialorrhea necessitates a multidisciplinary approach. Treatment options include speech therapy, behavioral therapy, radiotherapy, surgery, and pharmacological therapy. Noninvasive therapy such as speech or behavioral should be considered primarily. In surgical management, the recommendations on which surgical modality to try first are controversial and should be tailored to the individual patient under consideration. Pharmacological therapy is usually established for temporary symptomatic relief. Anticholinergic drugs decrease saliva production. Transdermal scopolamine has been used with success for short periods. Botulinum neurotoxin (BoNT) blocks acetylcholine release at the cholinergic neurosecretory junction of the salivary glands and can have a potential therapeutic role in sialorrhea. However, major objections have been raised, and thus, limit the therapeutic use. Some should be discussed here. General contraindications to BoNT treatment such as myasthenia gravis, Lambert-Eaton syndrome, and other neuromuscular disorders apply to its use in sialorrhea. Patients with PD may have decreased salivary production and concerns have been raised regarding worsening of dysphagia in advanced PD patients. Moreover, there have been reported side effects including dry mouth, dysphagia and recurrent jaw dislocation following BoNT treatment. Most published studies on BoNT application in sialorrhea were non blinded and uncontrolled, and hence may be subjected to biased suggestions. These trials frequently involved small numbers of patients and may lack statistical power. Dose-ranging information was in many cases not available, so that the optimal BoNT dose remains still not clear. The ideal sites of gland injections still need to be further examined by controlled studies. The relative superiority of injecting two glands over a single gland has not been clarified. Investigators have used various outcome measures to analyze sialorrhea, so that the comparison between studies are difficult. To avoid serious side effects and to improve considerably the results of BoNT injections time and cost consuming ultrasound guidance is required.

In conclusion, BoNT application in sialorrhea should be used very carefully and represents a second line treatment. The injection require clinical experience and skills as well as training in ultrasound guidance. Cost effect analysis of BoNT compared to the best medical treatment is not known. The relative efficacy of BoNT is still not clear. Additionally, outcome data on efficacy and adverse events from prospective, long term studies, treatment guidelines as well as treatment regimes are lacking.