Botulinum toxin is a valid therapeutic option for sialorrhea in neurological patients. The most concerning sequelae in this group of patients is posterior drooling, which occurs unseen in the hypopharynx and can lead to aspiration pneumonia. Prevention of respiratory infections may be especially critical for the survival of this population. In July 2018, the US Food and Drug Administration (FDA) approved incobotulinumtoxinA (Xeomin®) for adult patients with sialorrhea, making this the first and only neurotoxin with this indication in the United States. The aim of this study is to investigate the safety and efficacy of incobotulinumtoxinA injection into the salivary glands for the treatment of sialorrhea in neurological patients.

**Introduction**
Botulinum toxin is a valid therapeutic option for sialorrhea in neurological patients. The most concerning sequelae in this group of patients is posterior drooling, which occurs unseen in the hypopharynx and can lead to aspiration pneumonia. Prevention of respiratory infections may be especially critical for the survival of this population. In July 2018, the US Food and Drug Administration (FDA) approved incobotulinumtoxinA (Xeomin®) for adult patients with sialorrhea, making this the first and only neurotoxin with this indication in the United States. The aim of this study is to investigate the safety and efficacy of incobotulinumtoxinA injection into the salivary glands for the treatment of sialorrhea in neurological patients.

**Methods**
We treated 1 patient who had received a diagnosis of motoneuron disease. Approval was obtained from the appropriate Institutional Review Board. Written informed consent was obtained from the patient. We used the Thomas-Stonell and Greenberg Drooling Severity and Frequency Scale (DSFS) as a measure of outcome to quantify severity of sialorrhea. The patient’s caregiver was administered surveys prior to injection and then 4 weeks after injection. IncobotulinumtoxinA injection was administered to the middle of the glands by an experienced senior radiologist using ultrasound in order to improve injection accuracy. A total of 100 units, 20 units each to the bilateral submandibular and 30 units each to the bilateral parotid glands were injected under ultrasound guidance.

**Results**
The procedure was well tolerated by the patient. There were no immediate and/or late complications. No side effects were observed. The effects of incobotulinumtoxinA were observed 10 days after the procedure took place. The patient had clinically significant improvement in drooling between 9 to 4 DSFS total points.

**Conclusions**
Echo-guided injection of incobotulinumtoxinA into the salivary glands is safe, effective, repeatable, and well tolerated, without complications and/or side effects. These limited results are promising, especially given that this population is at considerable risk for morbidity and mortality (i.e., aspiration pneumonia) from sialorrhea.

**Bibliography**

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