

## Rapid response to botulinum antitoxin in hyperhidrosis patient

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### ABSTRACT

Botox injections are shots that use a toxin to prevent a muscle from moving for a limited time. These shots are often used to smooth wrinkles on the face. They're also used to treat neck spasms, sweating, overactive bladder, lazy eye and other conditions.

Keywords: botulinum toxin, systemic complications of botulinum.

## INTRODUCTION

Botulinum toxin is a neuro-toxin secreted by *Clostridium botulinum* that has many medical uses.

The most potent form of the toxin, which has eight different types, is botulinum toxin A. Only types A and B are used for medical and aesthetic purposes. It was first used in the treatment of strabismus in 1973. Botulinum toxin acts by decreasing acetylcholine release in the presynaptic terminal and causing neuromuscular blockade. Although ptosis may have complications such as facial asymmetry and diplopia, it also has rare systemic effects. In this case report, we wanted to present a patient who had botulinum toxin injection due to hyperhidrosis and complained of dyspnea, dysphagia and fatigue.

## CASE-REPORT

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**COMPLAINT:** The patient who had Botulinum toxin injection due to hyperhidrosis complained of dyspnea, dysphagia and fatigue after the application.

**Patient anamnesis:** Due to hyperhidrosis, botulinum injection was applied to the foot plantar face and armpit axillary region in the first session, and 10 days later, a control additional dose injection was applied to the hand palmar face and armpit axillary region. The patient applied to us with complaints of dysphagia, dyspnea and weakness in the arms, which developed 2 weeks after the control.

Patient medical record was remarkable otherwise.

Neurological exam: Conscious, speech corneal light reflexes and eye movements was normal. Facial asymmetry not observed. Absent gag reflex. Patient can count til 14 in one breath. Head anteflexion power was -5/5. Right and left upper extremity proximal muscle strength 2/5. Right and left upper extremity distal muscle strength 3/5. Right and left lower extremity muscle strength 4/5. Deep tendon reflexes was normal. Plantar reflexes was normal.

Clinical follow-up: The patient, who applied to the outpatient clinic because she experienced shortness of breath and difficulty swallowing after botulinum toxin injection, was admitted to the Neurology service for further examination and treatment with the diagnosis of Generalized botulismus. No acute pathology was observed in the non-contrast brain MRI and DWI. In the upper extremity general screening EMG performed on the patient, motor nerve CMAP values were found to be low in the upper extremities. In the repetitive nerve stimulation test performed on the patient, no significant decremental response was observed in low frequency stimulations (2-3-5 Hz). No postexercise facilitation was detected.

The examination could not be completed because the patient could not tolerate the high-frequency stimulation. Routine blood tests were taken from the patient. The patient's results were HbA1c: 4.8, LDL: 100, HDL: 49, RFT: N, TFT: N, Vit D: 16.46, Hepatitis Markers: N, Ferritin: 44,

Sedimentation: 6. Botulism anti-toxin was administered to the patient. At the 6th hour of treatment, the patient's swallowing dysfunction and upper extremity muscle deficits resolved.

The patient was started on mestinon 60 mg tablets in 3x1 dosage.

The patient, who had no additional complaints, was discharged with recommendations and neurological emergencies explained.

## DISCUSSION

Botulinum antitoxin is a treatment that targets toxins that are in circulation and have not yet caused blockage in the neuromuscular junction and prevents the worsening of the clinic. So it is assumed that it will not correct the current neuromuscular blockade. However, it can cause dramatic clinical improvements in generalized botulismus.

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## Conflict of interest

The authors declare that there is no conflict of interest.