P-131 Rare case of Iatrogenic Botulism after Botulinum toxin injection: a case report

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Introduction

Injection of botulinum toxin for cosmetic or therapeutic purposes has been shown to be safe, but rarely it can spread throughout the body and cause iatrogenic botulism (IB) with symptoms such as dysphagia, respiratory failure, and generalized muscle weakness. In this case report, we present the clinical course over time of a patient who affected with IB after receiving botulinum toxin injection for therapeutic purpose.

Case Report

A 52-year-old man presented to the emergency room complaining of dysarthria, dysphagia, ptosis in the right eye and dyspnea with intermittent stridor. The patient was a medical practitioner and confessed to taking botulinum toxin injections by himself to relieve chronic posterior neck pain and headache five days before admission. Although the dose of injection was not known precisely, the patient reported that he administered several injections into the posterior neck and right temporal area.

The initial brain magnetic resonance imaging and neck computed tomography scan showed unremarkable findings. To reverse botulinum intoxication, intravenous immunoglobulin therapy and pyridostigmine therapy 270 mg per day was started on HD 2, but the dyspnea gradually worsened. Subsequently, at HD 7, the patient experienced respiratory failure and ventilator support was neeed. The strength of the proximal upper extremities and the neck flexor muscles was grade 2 according to the Medical Research Council (MRC) scale. At HD59, ventilator weaning was successfully performed during the daytime. At HD 75, video fluoroscopic swallowing study (VFSS) showed residue at the vallecular fossa in moderate amount (Fig. 1). The patient had difficulty maintaining neutral position of the neck during the investigation. Based on the results, he required ongoing nasogastric tube feeding.

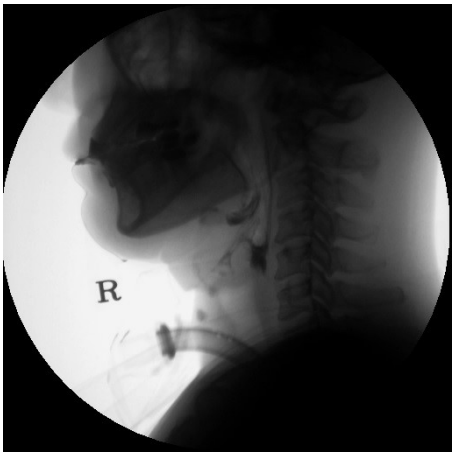

Fig 1. Video-fluoroscopic swallowing study performed at at HD75. Residue at vallecular fossa was found to be moderate in amount using barium.

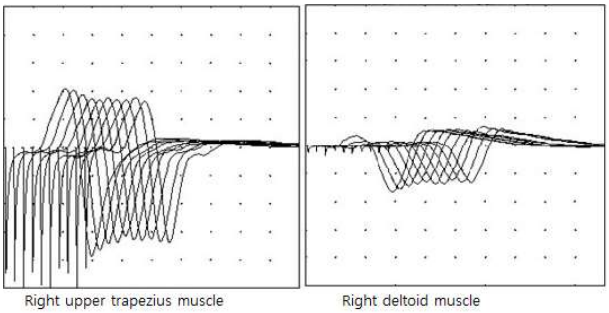

Fig 2. Repetitive nerve stimulation test. Decrement pattern of more than 10% of compound muscle action potential in the right spinal accessory nerve recorded at trapezius muscle and the right axillary nerve recorded at middle deltoid muscle on resting state were observed.

NCS and EMG were performed at HD82 to confirm the diagnosis. Repetitive nerve stimulation of the right axillary nerve revealed a 23% decrement in amplitude. There was no post-tetanic facilitation after 10 sec of exercise (Fig. 2). Based on the history and clinical features, the findings of NCS/EMG supported the diagnosis of IB. Pyridostigmine therapy was continued orally.

Follow-up VFSS was performed following dysphagia therapy at HD89. As the result of VFSS showed improvement, nasogastric tube feeding was ceased and transition to oral feeding was initiated. At HD94, the patient was able to walk independently for approximately 500 meter. Two months after discharge, the proximal muscle power of the upper limbs was restored to 2+ grade. Ptosis also improved, and the patient had no difficulty in voluntary opening of eyes.

Conclusion

This case reported the clinical course over time of IB, a little-known condition. This case report will be helpful in determining timely appropriate emergency treatment for patient with IB.