

Botulism or Myasthenia Gravis? Diagnostic and Therapeutic Challenges in Lebanon.

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"Background: Endoscopic botulinum toxin-A injection to the gastric antrum is used for weight reduction by delaying gastric emptying. Iatrogenic botulism has been reported but not from this procedure.

"Hypothesis: Can a subtoxic dose of Botox unmask myasthenia gravis or cause botulism?

"Method: This a single patient chart review. A 60-year-old female presented with 11 days of worsening dysphagia, weakness, and dyspnea that started three days after an endoscopic injection of 300 units of Botox (toxin A) into her gastric antrum. On exam, she had bilateral ptosis, slurred speech, weak neck and upper extremities muscles, with preserved lower externalities muscle power. Negative Inspiratory Force (NIF) was - 23 (nl > - 60). Neither the testing for botulinum nor the antitoxin are available in Lebanon. Because of the possibility of myasthenia, neostigmine was administered. The patient showed improvement of motor power in all extremities and her NIF measurement. EMG and nerve conduction study showed no evidence for neuro or myopathy. Repetitive nerve stimulation was abnormal and most pronounced in the proximal muscles with a 25% decrement. Serum acetylcholine receptor antibody was undetectable. The patient was started on pyridostigmine and discharged home two days after later. After two weeks, the patient reported near resolution of her symptoms.

"Discussion: The clinical presentation is highly suggestive of botulism although the administered dose (300 u) was subtoxic. Although the diagnosis by mouse lethality assay or by mass spectroscopy are not available in Lebanon, the delay in presentation and the small amount administered would have increased the likelihood of negative results by these methods. The improvement after neostigmine points towards myasthenia, however, it is conceivable that it would also occur in botulism. The antitoxin is expensive and not easily available in Lebanon and likely in other countries in the region.

"Conclusion: Botulism testing and treatment remain unavailable in most countries. The role of myasthenia gravis in this patient is unclear and may have served as a confounder considering the negative acetylcholine antibody test. Alternatively, botulism toxin may have unmasked a subclinical myasthenia illness. The role of neostigmine in mild cases of botulism may deserve investigation.