

**A Rare Case of Iatrogenic Botulism
Presenting with Acute Respiratory
Compromise
Following Cosmetic Botulinum Toxin
Injection**

Dr Haider Zahur

ST8 Intensive Care & Respiratory Medicine

Background

- • Botulinum toxin (BoNT) inhibits acetylcholine release at the neuromuscular junction.
- • Widely used in therapeutic and cosmetic settings.
- • Systemic iatrogenic botulism is extremely rare but life-threatening.
- • Clinical features: descending symmetrical paralysis, cranial nerve involvement, bulbar symptoms, respiratory failure.

Case Presentation

- • 47-year-old healthy male.
- • 5-day history: diplopia, dysphagia, hoarseness, dyspnea.
- • Cosmetic BoNT injection to forehead 5 days prior.
- • Findings: bilateral ptosis, bulbar weakness, neck flexor weakness (MRC 1/5), generalized hypotonia.
- • Stridor and bilateral vocal cord paralysis.
- • ABG: Type 1 respiratory failure → emergent intubation & ICU admission.

Investigations & Management

- • Botulinum antitoxin (20 mL IV) on day 2.
- • Public Health notified; serum sent for toxin assay.
- • Pyridostigmine 30 mg TDS started.
- • EMG/NCS: low-amplitude compound muscle action potentials
 - marked incremental response on high-frequency repetitive nerve stimulation(20–50 Hz),
 - consistent with a presynaptic neuromuscular transmission defect, confirming botulism.

Clinical Course & Outcome

- • Complications: failed extubation → tracheostomy (D4)
- • Persistent vocal cord paralysis on day 7 on repeat nasoendoscopy.
- • Gradual return of proximal strength by day 14 with partial resolution of cranial N deficit.
- • Transferred to neurology ward for rehabilitation.

Discussion

- • Systemic iatrogenic botulism is exceedingly rare after cosmetic injection.
- • Diagnosis: descending paralysis, EMG findings.
- • Antitoxin halts progression but doesn't reverse paralysis.
- • Supportive care and multidisciplinary management essential.

Conclusion

- • Maintain high suspicion for botulism in patients with bulbar or respiratory symptoms post-BoNT.
- • Early diagnosis, prompt antitoxin, and multidisciplinary supportive care are crucial.
- • Highlight vigilance in aesthetic procedures.