

Botulinum Toxin A for Belly Dancer’s Dyskinesia: A Case Report of Symptom and Pulmonary Benefit in a Patient with ILD

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Background

- Belly Dancer’s Dyskinesia (BDD) is a rare movement disorder marked by involuntary, rhythmic contractions of the abdominal wall
- Etiologies include central or peripheral neurologic lesions, phrenic nerve irritation, medication effects, and prior abdominal trauma
- Symptoms can be distressing and functionally limiting and may affect breathing or digestion
- Pharmacologic therapy is often ineffective; botulinum toxin A (BoNT-A) has shown promise in isolated reports but lacks standardized dosing or injection protocols

Methods

- Written informed consent obtained for publication and academic use
- Clinical evaluation: MRI brain/spine, EMG, and neurologic assessment

Results

- Substantial symptomatic improvement in abdominal spasms
- Improved respiratory function and reduced pulmonary complications post-treatment
- No adverse reactions to BoNT-A

Case Report

- 72-year-old woman with:
 - Interstitial lung disease (ILD)
 - History of abdominal shingles
 - GERD s/p Nissen fundoplication
- Presented with visible abdominal wall spasms, consistent with BDD, causing dyspnea and oxygen desaturation during episodes
- EMG findings: 5–6 Hz rhythmic tremor in rectus abdominis and external oblique muscles
- Partial relief with clonazepam, but persistent spasms and recurrent aspiration pneumonia/pneumonitis caused by these spasms
- Intervention:
 - BoNT-A injected into 20 sites total (10 per side of anterior abdominal wall)
 - Total dose: 100 units via 30-gauge needle, distributed evenly along muscle bellies
- Follow-up (3 months):
 - ~50% reduction in spasm frequency and severity
 - No adverse effects reported
 - Pulmonary improvement: Recent pneumonia did not require hospitalization; pulmonologist attributed benefit to improved breathing mechanics and cough strength

Discussion

- BoNT-A may provide dual benefit in BDD with comorbid pulmonary disease:
 - Reduces motor hyperactivity of abdominal wall
 - Enhances diaphragmatic movement and cough mechanics
- This case study supports emerging evidence for safe, effective use of BoNT-A in abdominal wall movement disorders
- This case also highlights the need for protocol standardization and further study into BDD pathophysiology and optimal injection mapping

References

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