

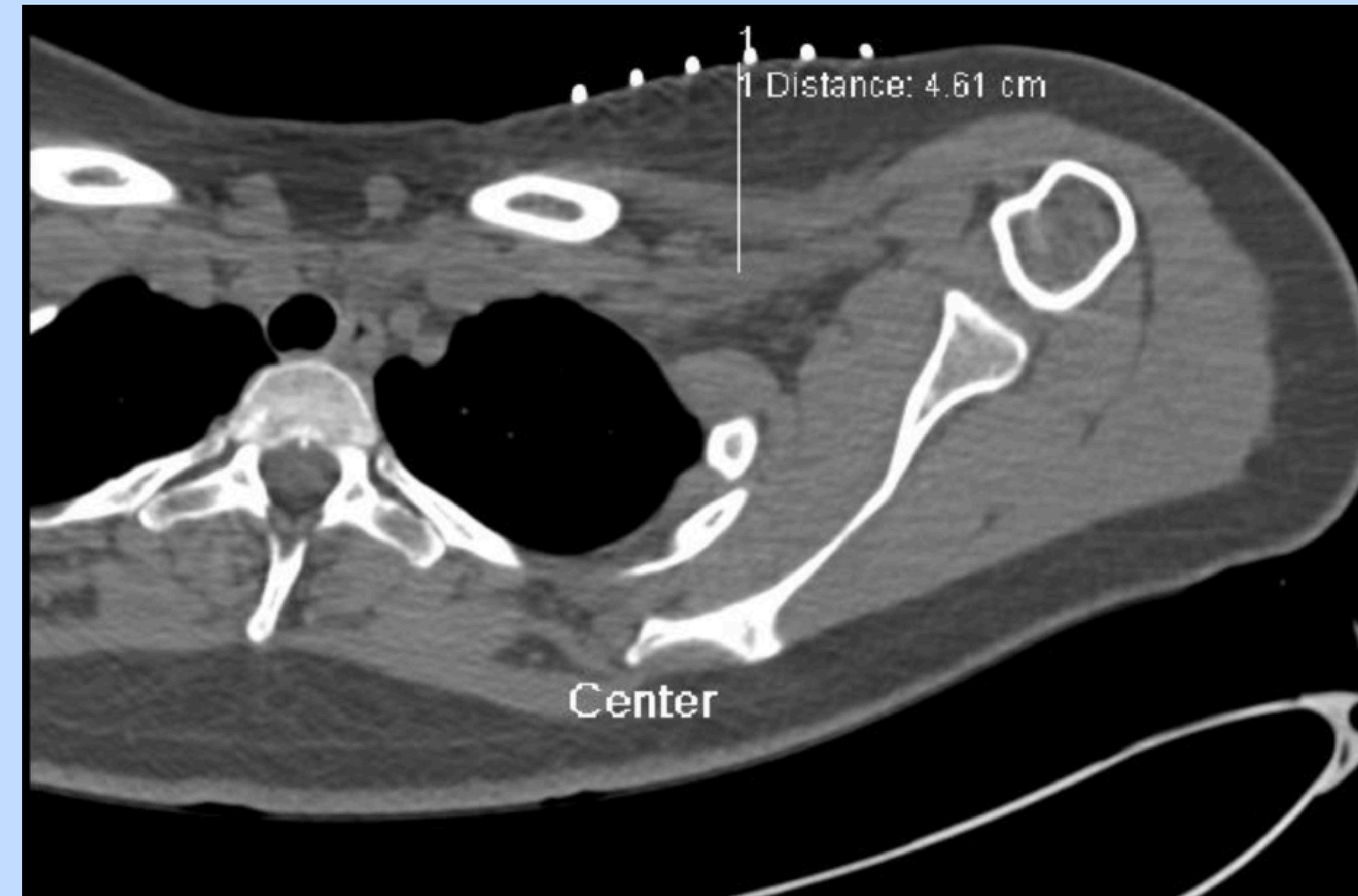
Thoracic Outlet Syndrome (TOS) Successfully Managed with Botulinum Toxin Injection Following Multiple Failed Surgeries

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Introduction

Thoracic Outlet Syndrome (TOS) refers to a collection of subjective symptoms and clinical findings caused by compression of the neurovascular bundle as it passes through the thoracic outlet. Patients with persistent or worsening symptoms despite conservative management may be surgical candidates. We report a case of a patient with post-traumatic neurogenic thoracic outlet syndrome with persistent pain following multiple surgeries and neurolysis but had significant pain relief following a left pectoralis minor botulinum toxin injection.



- CT-guided left pectoralis minor botulinum toxin injection. A total of 25 units of Botulinum toxin was utilized.

Materials/Methods

The case report is devoid of patient identifiable information and is exempt from IRB review requirements, as per Johns Hopkins University School of Medicine policy. Informed consent was obtained from the patient.

Discussion

- Initial management of TOS includes physical therapy, pharmacologic agents, and injections (anesthetic, steroid, or botulinum toxin).
- Patients with persistent symptoms are candidates for thoracic outlet decompression.
- Due to recurrence and surgical complications, the benefit of surgical intervention remains questionable.
- Our patient failed multiple surgeries but had significant relief with a botulinum toxin injection.
- This highlights the potential of botulinum toxin for refractory TOS.
- More research is needed to identify long-term treatment options.

Results/Case Report

Our patient is a 28-year-old female with left-sided post-traumatic neurogenic thoracic outlet syndrome following a whiplash injury. She reported left shoulder, arm, and finger pain with weakness, numbness, and tingling, unrelieved by physical therapy or oral medications. She underwent left first rib resection, brachial plexus neurolysis, scalenectomy, and pectoralis minor tenotomy with initial relief, but symptoms returned after another motor vehicle accident. Diagnosed with recurrent pectoralis minor syndrome, she had resection of the left pectoralis minor and repeat neurolysis, but symptoms persisted. At our pain clinic, she presented with pain, weakness, allodynia, and hyperalgesia of the left arm, chest wall, and hand. A left pectoralis minor botulinum toxin injection provided 40% symptom improvement, enabling physical therapy and daily activities.

References

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