

# THE ROLE OF BOTULINUM TOXIN IN THE TREATMENT OF NOTALGIA PARESTHETICA - CASE REPORT AND LITERATURE REVIEW

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## Background

Notalgia Paresthetica (NP) is a sensory neuropathy characterized by chronic pruritus, paresthesias, and pain, often linked to cervical or thoracic spinal nerves dorsal rami dysfunction. Damaged C fibers generate ectopic discharges, with neuroinflammatory mediators amplifying peripheral sensitization. Botulinum Toxin (BT) inhibits neurotransmitter release, modulating neurogenic inflammation and peripheral sensitization, which presents a promising therapeutic option for refractory NP.

## Case report

Case 1: An 81-year-old woman presented with chronic pruritus and right dorsal pain, for 14 years, worsening, reaching an intensity 10/10 on the numeric scale. Objectively, a hyperpigmented lesion was observed in the scapular region. Lhermitte, Spurling, and Hoffman tests were negative. MRI revealed left-predominant C6/C7 disc protrusion with possible involvement of C7 nerve root. Gabapentinoids, tricyclic antidepressants, and topical lidocaine, proved ineffective. Consequently, subcutaneous infiltration of 100U Onabotulinum Toxin A was proposed in the delimited region. The procedure occurred without complications, and after one week, the patient reported a 30% improvement - the first relief in 14 years. Case 2: A 69-year-old man presented with pruritus in the left scapular region, for over a year, with a 8/10 intensity on the numeric scale. Initially misdiagnosed as dermatophytosis, he was treated with topical antifungal and antihistamines without resolution. Objectively, a pruritic hyperpigmented area with scratch lesions was observed. MRI documented diffuse posterior disco-osteophytic complex with reduced foraminal permeability bilaterally at the C6/C7 level, possibly compromising the C7 nerve root. A subcutaneous infiltration with 100U Onabotulinum Toxin A was performed in the delimited region, without adverse effects. After one month, the patient reported a 50% improvement, and by four months, he was asymptomatic.

## Conclusion

Botulinum toxin demonstrated a safe and effective therapeutic option for refractory Notalgia Paresthetica, leading to symptomatic relief, even in longstanding cases, without adverse effects. Nevertheless, further controlled studies are necessary to establish optimal dosing, treatment duration, and patient selection criteria.

**Keywords:** Botulinum, Toxin, Notalgia, Paresthetica, Pruritus