Effective Treatment of Platysma Bands with Neurotoxin

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The use of neurotoxins has dramatically increased over the past 2 decades, increasing 800% since 2000, with over 7 million procedures performed in 2018.1 Botulinum toxin is a potent neuromodulator produced by the bacterium Clostridium botulinum, which blocks the release of acetylcholine from presynaptic vesicles at the neuromuscular junction, leading to flaccid paralysis. Neuromodulation with botulinum toxin is the mainstay of nonsurgical rejuvenation of platysma bands, particularly dynamic bands.2,3

A comprehensive and systematic facial analysis is critical in formulating a precise plan for nonsurgical treatment of the platysma muscle and restoration of a youthful neck. Additionally, setting realistic expectations with the patient is critical in achieving high patient satisfaction. A youthful neck, as described by Ellenbogen and Karlin,4 has a distinct inferior mandibular border, visible subhyoid depression, visible thyroid cartilage bulge, visible anterior border of the sternocleidomastoid muscle, and a cervicomental angle of 105–120 degrees. Plastyoma banding is one of the classic stigmata of the aging neck. The pathogenesis of platysma bands is likely due to age-related weakening of the cervical fascia, resulting in a bulge, or band, from deeper neck structures. Thorough analysis of the aging face includes noting the degree of preplatysmal and subplatysmal lipodystrophy, the presence of bands, whether partial or full, in relation to the mandibular border, and the degree of nasolabial jowls extending into the neck. The location, course, and distance between bands along the neck are noted, and the patient is asked to tense the platysma to evaluate for static (passive) or dynamic (active) bands.

Once an ideal candidate patient has been selected and thorough analysis is performed, botulinum toxin is injected directly into anterior, lateral, and the platysma band themselves. (See Video [online], which illustrates the authors’ injection technique in a patient with minimal skin laxity and active bands and demonstrates a case example before and 2 weeks after treatment.) It is important to note that the bands should be grasped and distracted away from the neck before injection to avoid potential complications associated with deeper injections, such as dysphagia. Typically, the starting dose for women and men is 10–30 and 10–40 units, respectively; however, band thickness ultimately determines the amount required. A dose of approximately 10 units is injected along the mandibular border to improve jaw contour (the Nefertiti effect). However, it is important to inject no closer than one finger breadth below the mandibular border to prevent inadvertent effects on the muscles of mastication and lower lip depressors. It is important to inject into each band anywhere from 2 to 12 times, using 1–2 units every centimeter. In general, 40–100 total units of botulinum toxin is used for effective treatment.

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