Chronic migraine with medication overuse and Onabotulinumtoxin A: two positive reports of a modified injection protocol

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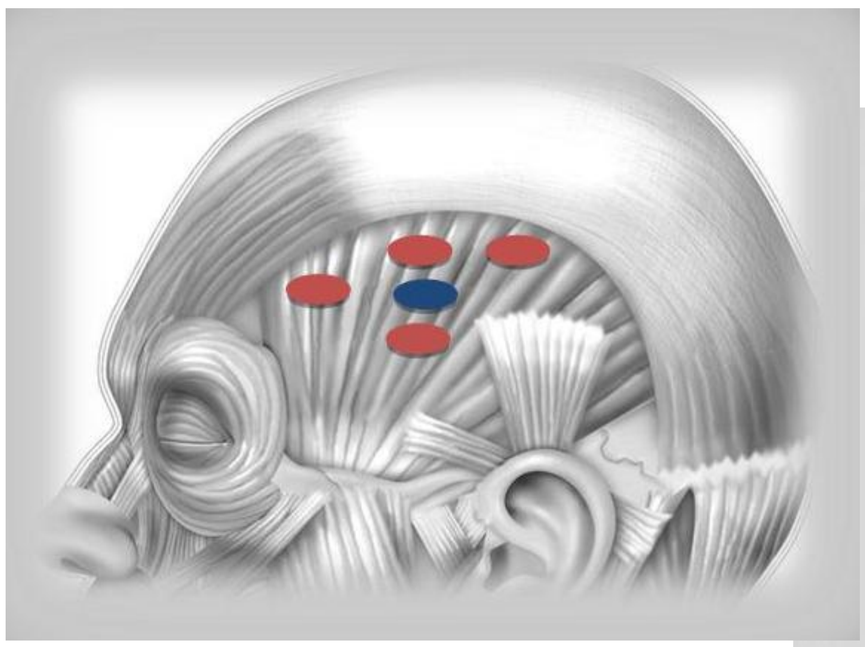
Objective: to propose a modified injection protocol in patients treated with OnabotulinumtoxinA for chronic migraine who experience local adverse events, but good clinical response. OnabotulinumtoxinA is proposed as alternative prophylactic treatment for chronic migraine with/without medication overuse. Treatment is usually safe and well tolerated; the most frequent adverse event is muscular weakness. Local pain, paresthesia/hypoesthesia, oedema, erythema, ecchymosis are common; tearing and photophobia are rare.

Materials and Methods: we report 2 cases of patients treated with OnabotulinumtoxinA for chronic migraine following the standard procedure (155 UI, 31 fixed injection sites)[1], who experienced tearing and bilateral photophobia. Both patients were female, with a diagnosis of chronic migraine according to International Classification of Headache Disorders (ICHD-III), with medication overuse, and met clinical criteria for refractory migraine [2], since more than two class of prophylactic drugs resulted ineffective.

Results: first injection with OnabotulinumtoxinA was practiced following standard procedure: 7 anterior injections (corrugator, procerus and frontalis muscles) and, for each side, 4 injections at temporalis muscle, 3 at occipitalis muscle, 2 at cervical paraspinal muscles, 3 at trapezius muscle. No periprocedural adverse events were reported. Few days after injections, both patients complained of bilateral tearing and severe photophobia. Relevant ophthalmic pathologies were ruled out. Symptoms progressively disappeared within a month. Both patients noticed a reduction in the mean number of headache-days per month (Patient 1: from 30 to 9 days; Patient 2: from 30 to 5 days) and improvement of pain intensity; medication overuse ceased. We decided to practice a second treatment with OnabotulinumtoxinA, injecting 50UI at temporal sites, 40UI at occipital sites, 20UI at cervical sites and 50UI on trapezius muscles (the points of injection were those specified by both the standard and follow the pain protocol avoiding the anterior approach – see Figure 1,2). No adverse events were reported and the clinical benefit was confirmed; a third treatment was performed, with similar results.

Discussion: The prolonged positive effect (9-month follow-up) observed in our patients suggests that alternative approach with OnabotulinumtoxinA could be tried, if validated by further reports, in patients with severe local adverse events related to anterior injections, but remarkable clinical improvement.



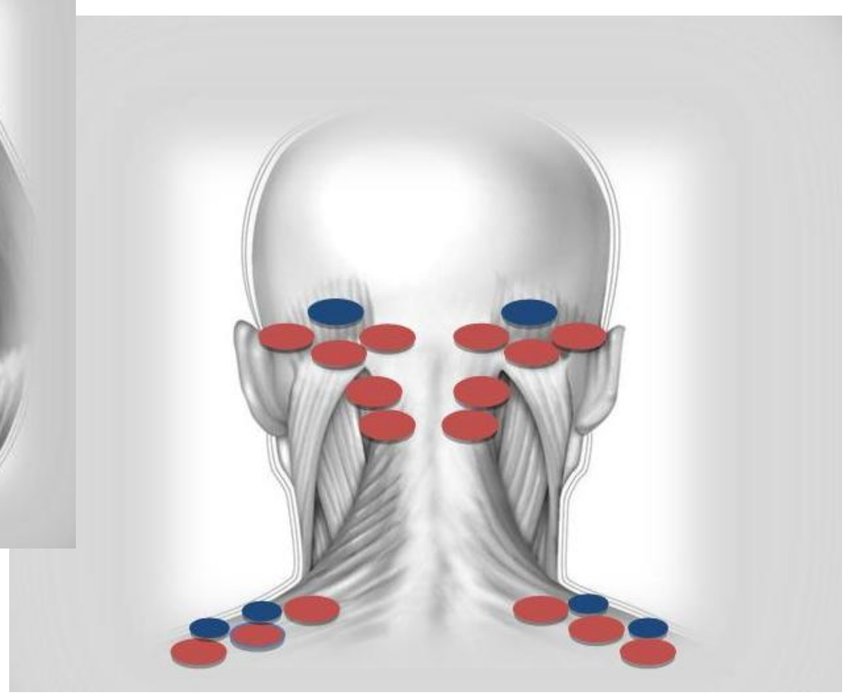


Fig. 1 and 2:
modified injection protocol

Conclusions: according to our experience a different approach with selected sites of injection may be equally effective if adequate dose of neurotoxin is used. This observation reinforces the hypotesis of a central action of OnabotulinumtoxinA, by blocking the release of inflammatory mediators from trigeminal neurons, involved in the maintenance of central sensitization..

Bibliography:

1 Method of injection of onabotulinumtoxinA for chronic migraine: a safe, well-tolerated, and effective treatment paradigm based on the PREEMPT clinical program. Blumenfeld A. Headache 2010.

2 Refractory Migraine – A Review. Schulman E. Headache 2013.

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