

INTRODUCTION

Sleep bruxism is a condition characterized by teeth grinding and clenching during sleep, which can lead to various dental and overall health problems. Despite the prevalence of bruxism, effective treatment options can be challenging to identify. This poster aims to report a clinical case of a patient diagnosed with sleep bruxism who received BTX-A (Botox®) injections in the masseter and temporal muscles, and evaluate the electromyographic changes before and after BTX-A (Botox®) application, providing insights into the effectiveness of this treatment approach.

METHODS & MATERIAL

A 56 year old female patient, had had migranes for 5 Years. She also had signs and symptoms of myofascial pain and sleep bruxism, which was diagnosed through polysomnography. Many treatments were done, however, neither of them did not demonstrate effectiveness. A treatment using botulinum toxin was proposed.



Electrodes Placement:

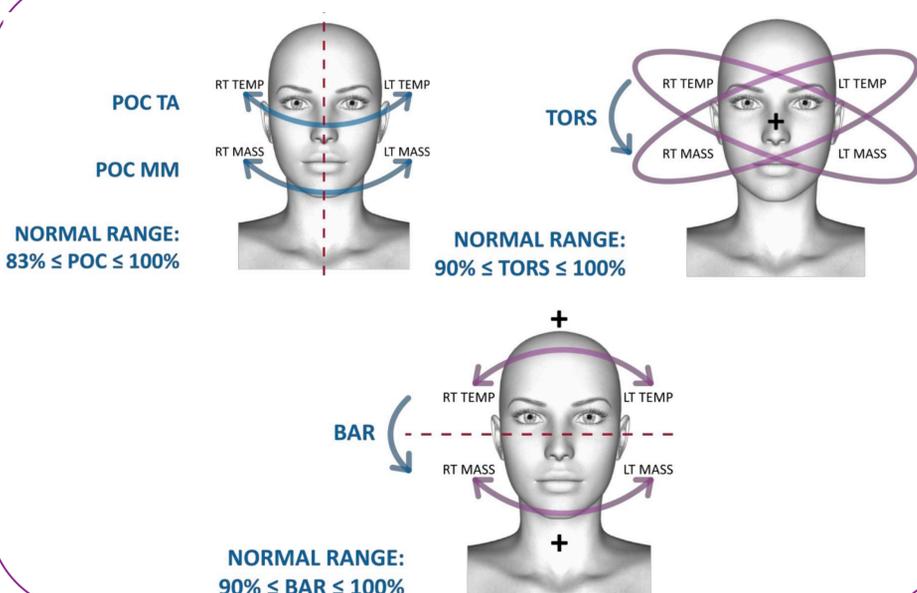
Surface electromyography TEETHAN (EMG) was conducted on the masseter and temporal muscles. Electrodes were positioned on these muscles to capture the electrical activity.

EMG Measurement:

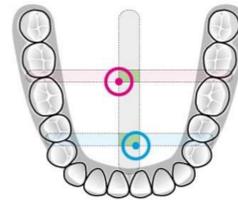
Surface electromyography (EMG) was performed using a TEETHAN system. This system recorded and analyzed the electrical activity of the masseter and temporal muscles.

Botulinum Toxin Application:

A bottle of 100 units (U) of botulinum toxin type A (BTX-A, Botox® Allergan) were diluted in 1 ml of sterile 0.9% saline solution. A 30 units (U) of BTX-A injections were administered into the right and left masseter muscles. Additionally, 10 units (U) of BTX-A were injected into the right and left temporal muscles.

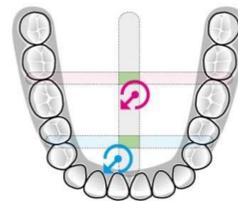


RESULTS



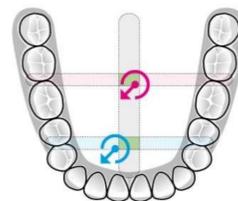
Measurement prior to the application of BTX-A.

89



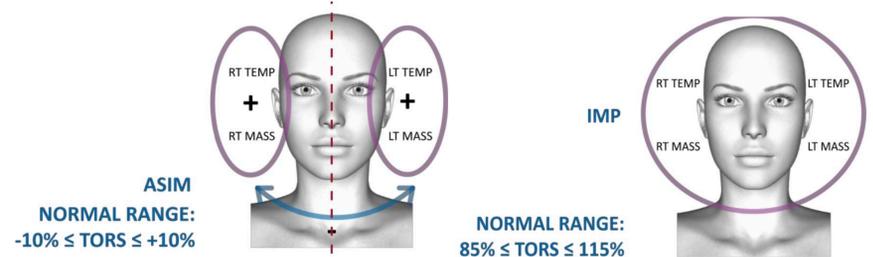
Measurement 30 days after to the application of BTX-A.

82



Measurement 6 months after to the application of BTX-A.

88



CONCLUSION

The use of botulinum toxin proved to be effective, minimally invasive, and free of side effects, making it a viable option for pain management in bruxism patients. However, it did not demonstrate effectiveness in altering the electromyographic behavior of the masseter and temporal muscles. Therefore, it should be considered as an adjunctive treatment option rather than a standalone solution for controlling the signs and symptoms of bruxism. Other treatment alternatives may still be necessary to address the complete management of bruxism.

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