Evaluation of the Effectiveness of the Treatment of Depression with Botulinic Toxin in the Glabellar Region, Through Professional and Patient Perception: Case Report

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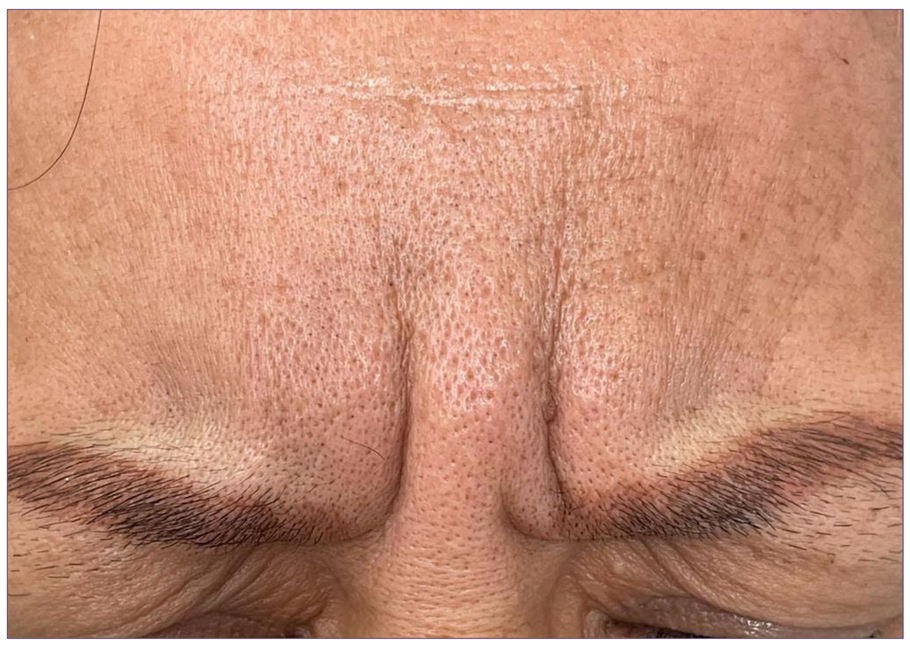
INTRODUCTION

Depression is one of the main causes of disability worldwide, caused by psychological, social and biological factors. Despite various pharmacological and psychotherapeutic treatment strategies, many patients do not achieve remission. Also, most antidepressants require daily adherence and can cause significant side effects. There is undoubtedly a need for new approaches to treating major depression.

Sustained on the hypothesis of interruption of the feedback loop of “emotional proprioception” from the face to the brain, the objective of this work was to evaluate the effectiveness of botulinum toxin type A (BONT/A) in the glabellar region in the treatment of unipolar major depression, mild to moderate, resistant to established treatments, from the medical point of view through the Montgomery-Asberg Depression Rating Scale (MADRS) and from the patient's point of view through the 9-question Patient Health Questionnaire (PHQ-9).



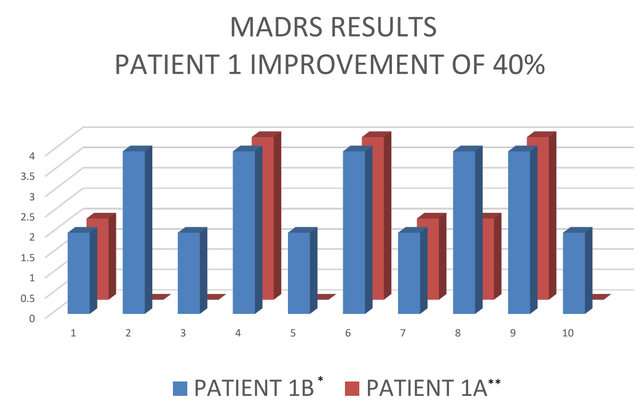
METHODS & MATERIAL

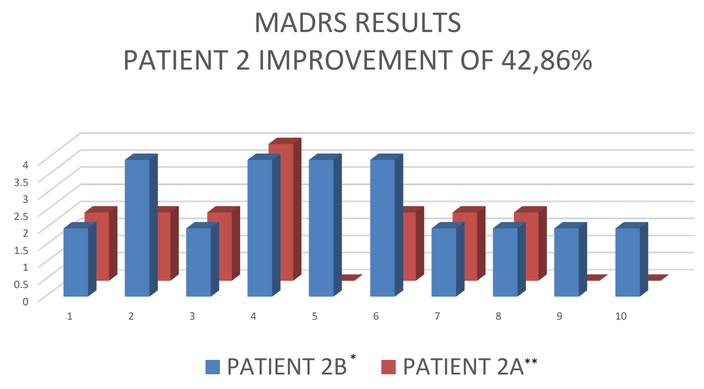
We selected 3 female patients, aged between 20 and 50 years old, diagnosed with mild to moderate unipolar depression, undergoing treatment, but with residual symptoms. Exclusion criteria were patients who applied botulinum toxin for less than 6 months, and patients with unstable clinical diseases (such as diabetes and hypothyroidism). The patients initially underwent a teleconsultation with a psychiatrist, where the MINI assessment scale was applied, where they met the inclusion and exclusion criteria, therefore, the MADRS assessment scale was applied shortly after. Before the application of the toxin, the patients signed the terms of consent for the application of botulinum toxin and case report, then answered the PHQ9 questionnaire, consisting of nine questions, which assess the presence of each of the symptoms for the episode of major depression. Type A toxin BOTOX® (Allergan, Irvine, CA) was used in dry dilution, according to the product package leaflet, applied in the glabellar region, 7 units in the procerus muscle and 18 units in the corrugator muscles. The patients returned 15 days after the application of BoNT/A and were reassessed by the psychiatrist, with the reapplication of the MADRS evaluation scale and also answered the PHQ9 questionnaire again.

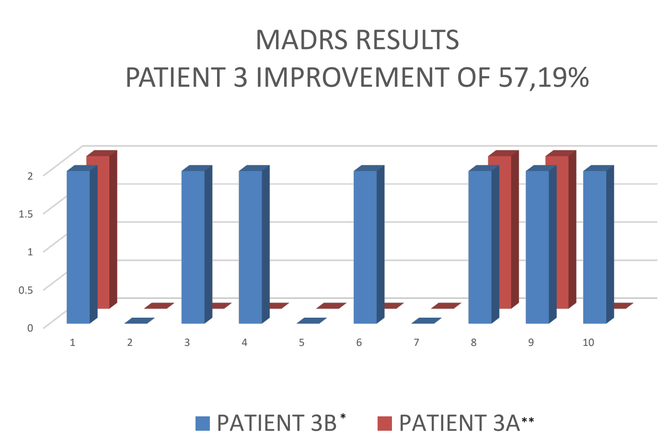
RESULTS

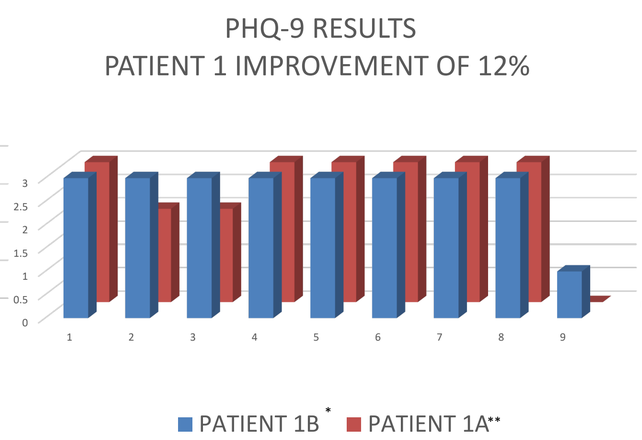
A decrease in depression scores on the MADRS scale was found for the three patients who, prior to the application of botulinum toxin, had scores of 30, 28 and 14, and when reassessed, 15 days after the application, a decrease was observed to 18, 16 and 6, respectively, meaning an improvement of 40%, 42.86%, and 57.19%. An improvement was also observed in the scores of the PHQ9 scale for the three patients, from 25, 19 and 17, when reassessed, to 22, 10 and 15, reflecting an improvement of 12%, 47.36% and 11.76%, respectively.

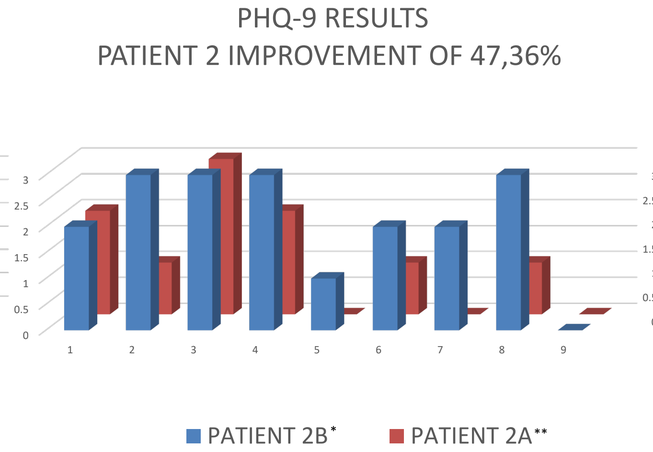
* Before toxin
** After toxin

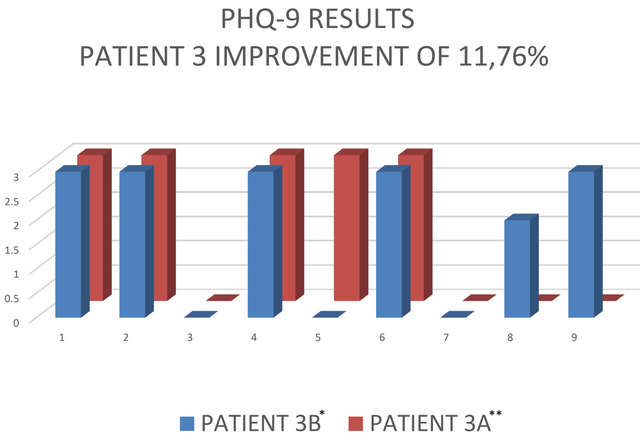












DISCUSSION

Studies show that botulinum toxin has been shown to be effective in the treatment of major depression, with results comparable to those of antidepressant medications, delivering faster results and fewer side effects. Based on the hypothesis of the “facial feedback” theory, which maintains that facial expressions can affect emotional perceptions, the paralysis of the muscles in the glabellar region, through botulinum toxin, interrupts the cycle of emotional proprioception, preventing negative sensations from get to the brain.

CONCLUSION

In recent years, the search for new treatment options has become even more necessary, and evidence for the indication of botulinum toxin in the glabella region as a treatment option for depression has been presented.

In this study, the decrease in the scores of depressive patients treated with botulinum toxin in the glabellar region suggests the effectiveness of this treatment, as already observed in previous studies.

REFERENCES

SCAN ME

Presented at the 99th Annual Session of the Greater New York Dental Meeting in 2023.