PRETARSAL BLEPHAROSPASM: CLINICAL, ELECTROMIOGRAPHIC FEATURES AND LONG TERM TREATMENT WITH BOTULINUM TOXIN

Muñoz González A[1], Pérez Sánchez JR[1], Traba A[2], De La Casa Fages B[1], Contreras Chicote A[1], Velázquez Pérez JM[1], Esteban A[2], Grandas F[1]

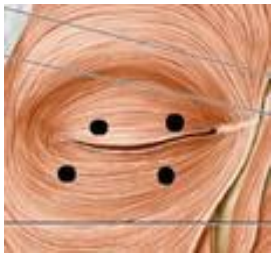
[1] *Service of Neurology, Hospital General Universitario Gregorio Marañón, Madrid (Spain)*

[2] *Service of Neurophisiology, Hospital General Universitario Gregorio marañón, Madrid (Spain)*

INTRODUCTION

We aim to describe the clinical and electromyographic (EMG) features, and long-term follow-up of patients with pretarsal blepharospasm (PB).

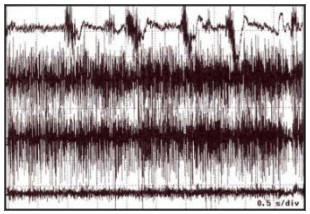
METHODS

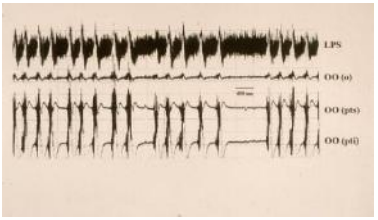


- Patients with a clinical diagnosis of idiopathic blepharospasm who did not improve with botulinum toxin (BTX) injections applied to the conventional injection sites underwent clinical evaluation and EMG simultaneous recording of different parts of the orbicularis oculi (OO) and levator palpebrae superioris muscles (LPS).
- The clinical response to pretarsal BTX injections was assessed using Elston's functional scale.

RESULTS

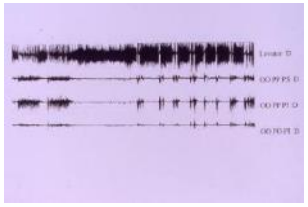
- A total of 24 patients (20 females) with selective involvement of the pretarsal part of the OO muscle entered the study.
- Three clinical EMG patterns were identified:





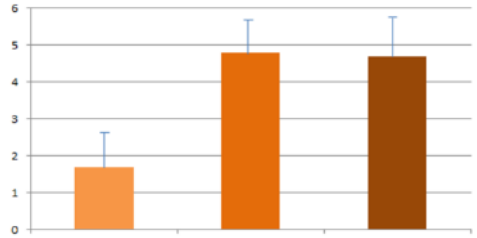
1. Impairment of eyelid opening (25%)

2. Excessive blinking (33%)



3. A combination of the above with spasm of eye closure (48%)

- All patients improved after pretarsal BTX injections (*P*<0.001) with sustained response after periodic injections.
- Mean (SD) BTX dose was 46.8(11.8)U.



Mean scores in Elston´s Functionale Scale

- Mean (SD) duration of clinical improvement was 9.8 (1.8) weeks.
- Normal vision function was recovered in 58% of patients. Over 491 treatment sessions, notable side effects included local hematomas (n=8), weakness of the OO muscle (n=9), and diplopia (n=1).

CONCLUSIONS

Our results confirm the existence of a subtype of blepharospasm with predominant or exclusive involvement of the pretarsal part of the OO muscle. Pretarsal blepharospasm can be identified by its clinical and EMG features. Selective BTX injection into the pretarsal part of the OO muscle is a very effective short- and long-term treatment with few side effects.

BIBLIOGRAPHY

1. *Grandas F, Elston J, Quinn N, Marsden CD. Blepharospasm: a review of 264 patients. J Neurol Neurosurg Psychiatry. 1988;51(6):767-72.*
2. *Aramideh M, Ongerboer de Visser BW, Devriese PP, Bour LJ, Speelman JD. Electromyographic features of levator palpebrae superioris and orbicularis oculi muscles in blepharospasm. Brain. 1994;117 (Pt 1):27-38.*