

PERIPHERAL FACIAL PALSY AND BOTULINUM TOXIN: FIVE YEARS OF CLINICAL EXPERIENCE IN A HOSPITAL- BASED REHABILITATION SETTING

**Ana Isabel Romeiro, Joana Ramalho, Ana Sofia Azevedo,
Manuel Coutinho Fernandes, Filipe Mendes, Diana Rocha Oliveira,
David Moura, Maria Inês Táboas, Pedro Cubelo Pereira, Catarina Aguiar Branco**

Unidade Local de Saúde de Entre o Douro e o Vouga, Portugal
e-mail: anaisabelromeiro@gmail.com

Background and Aims

Peripheral facial palsy (PFP) can cause functional and psychosocial impairment due to facial asymmetry, involuntary movements and synkinesis. A considerable number of patients develop persistent sequelae requiring targeted rehabilitation. Botulinum toxin (BTX) injection is a valuable therapeutic option to manage synkinesis and muscular hyperactivity in chronic PFP, improving facial symmetry and quality of life. We aim to characterize the clinical profiles of patients with PFP treated with BTX at a hospital-based rehabilitation service over a 5-year period (2020–2025) and describe treatment patterns (target muscles, dosages, adverse events).

Methods

We conducted an observational, retrospective study, analysed dose evolution over successive sessions using a mixed-effects model, and explored the relationship between initial and final doses via Pearson correlation.

Results

Fifteen patients (66.7% female, mean age 58.3 years) with PFP were included. All underwent initial rehabilitation with physiotherapy and a home exercise program. Due to refractory synkinesis and/or asymmetry, they were referred a median of 15 months after the initial diagnosis for BTX treatment, receiving a mean of 4.5 sessions. Treatment objectives included improving symmetry (100%), reducing synkinesis of the orbicularis oculi (86.7%) and/or platysma (13.3%), and minimizing oral mucosa trauma (20%), pain (13.3%), and tearing (13.3%). The most frequently injected muscle was the orbicularis oculi (100%), followed by the inferior tarsal (93.3%) and frontalis (66.7%), which received the highest total doses. Least frequently injected muscles included the procerus, nasal, depressor anguli oris and levator alaeque nasi (all 6.7%). A mixed-effects model suggested a 0.053-unit dose increase per session. Pearson correlation indicated a moderate positive correlation between initial and final doses. 26.7% of patients reported minor adverse events. Satisfaction was commonly reported after two treatment sessions.

Conclusion

BTX injections are safe and effective for managing late complications of PFP. Our findings suggest a gradual dose increase over time, with higher initial doses predicting higher final doses.

Keywords: Peripheral facial palsy, botulinum toxin