



Botulinum Toxin Usefulness in the Treatment of Drooling in Childhood

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Abstract:

Introduction: Drooling is a common and severe problem in different kind of disorders. It affects both adults and children and it is the cause for respiratory infections or dermal complications as minor social participation. Ultrasound botulinum toxin injections could be a successful option to reduce excessive sialorrhea in children independently whose origin it has.

Methods: Retrospective-descriptive survey. Period study: 2010-2019. Inclusion criteria: patients under 18 on severe drooling. Measure units: demographic data, glands injected, botulinum toxin dosage, side effects, intensity and frequency drooling scale (IFDS), and daily changes of bibs/tissues before and 1 month after ultrasound guided injection, use of sedation during procedure and feeding mode. Intervention was performed with ultrasound guidance of salivary glands (10 MHZ linear transducer: submental acoustic window of submaxilar glands and transverse scans of parotid glands)

Results: 67 patients, 58,2% females. Mean age 9,03 (limits: 4-14 years). 46,3% were Cerebral Palsy patients. The most frequently gland infiltrated was submaxilar (53,7%). They showed severe drooling (65,7%) or profuse drooling (26,9%) and 88,1% constantly drooled pre treatment. Botulinum toxin total dosage average used, was 53,78 IU (Parotids/ submaxilar mean dosage: 23,06 IU/ 19,49 IU respectively). 30 day post treatment assessment: 6% no drooling and 68,6% mild or moderate drooling, 34,1 % occasionally drooled. Statistical significative difference ($p < 0,05$) pre-post infiltration. Daily bibs changes post-injection reduction: 48%. Non-response to toxin injection in ten of the treatment sessions: 14,9% cases. Side-effects: 2,98% (hematoma/ mild dysphagia). No differences observed by glands number injected, sedation procedure or underlying disease.

Conclusions: Ultrasound botulinum toxin injections in children with severe drooling, demonstrated clinical improvement in reduction on saliva. The usefulness didn't depend on the disease that originated the sialorrhea. Some children failed to



respond to the treatment due probably to insufficient dosage, inadequate diagnosis or uncontrolled secondary drooling factors. Good results were possible with injections of two glands (instead of four), reducing side effects possibility.

Biography:

Paola Diaz Borrego has completed his PhD at the age of 27 years from Seville University and postdoctoral studies from Seville University School of Medicine. She is Physical Medicine and Rehabilitation Consultant, specialized in Phoniatics, and the director of Phoniatic/Speech and Language Therapy Unit (Physical Medicine and Rehabilitation Department) in Virgen Macarena University Hospital, Seville, Spain. She has published more than 20 papers in reputed journals and has been serving as an editorial board member in several journals as: *Rehabilitacion (Madr)*, *Neurology & Neurosurgery*, *Ocronos*.

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Citation: Paola Diaz Borrego; Botulinum Toxin Usefulness in the Treatment of Drooling in Childhood; *Euro Pediatrics* 2020: Novemner 23, 2020, Madrid, Spain