IS THERE A ROLE FOR BOTULINUM TOXIN THERAPY IN CEREBRAL PALSY IN A DEVELOPING COUNTRY?

Experience from a Sri Lankan Tertiary Care Paediatric Neurology Unit


1 Paediatric Neurology Unit, Teaching Hospital Karapitiya, Galle, Sri Lanka. 2. Occupational Therapy Unit, General Hospital Matara, Sri Lanka. 3. Occupational Therapy Unit, Teaching Hospital Karapitiya, Galle, Sri Lanka

Introduction

Botulinum Toxin type A (BTX-A) is a widely used treatment modality for the management of focal spasticity in children with cerebral palsy (CP). To date, most studies reveal beneficial effects from BTX-A injections in terms of decreased muscle tone, increased range of movement and improvement of functions including gait and hand functions. However, it has not been systematically studied in a developing country such as Sri Lanka.

Objective

To systematically evaluate functional outcome of children with CP after BTX-A injection in a busy Paediatric Neurology Unit.

Methods

Functional status of all children receiving BTX-A from 08.03.2013 to 31.12.2014 was evaluated before and several months after injection, using Gross Motor Functional Classification System (GMFCS), Manual Ability Classification (MAC), achievement of individual predetermined goals as identified by therapists and families, and parents’ satisfaction. An individualized therapy program was recommended based on specific goals set for the injection. Paired T test was used to compare GMFCS and MAC, before and after BTX-A.

Results

Seventy seven children met inclusion criteria. Fifty eight per cent was male and Mean age was 5.8 years.

Diagnoses included spastic diplegia (21%), spastic hemiplegia (38%) and spastic quadriplegia (31%). Statistically significant improvement in GMFCS level was noted after BTX-A to the lower extremities (p <0.05), as well as in MAC improvement after upper extremity BTX-A (p <0.05).

Conclusion and Recommendations

Similar to prior published results from other countries, we found that significant functional improvement occurs following BTX-A injection coupled with an individualized therapy program in children with CP. Neurorehabilitation for children with CP in Sri Lanka presents unique challenges: further work is necessary to clarify the optimal, cost effective role for BTX-A therapy as well as other rehabilitation techniques in Sri Lankan children with CP.