

## Consensus paper

# European consensus statement on the use of botulinum toxin type A in the management of adult spasticity

Anthony B. WARD<sup>1</sup>, Jörg WISSEL<sup>2</sup>, Franco MOLTENI<sup>3</sup>, Anton YAKOVLEFF<sup>4</sup>, Susanne GEDIN<sup>5</sup>, Miguel AGUILAR<sup>6</sup>,  
Petr KANOVSKY<sup>7</sup> and Diederik ZEGERS DE BEYL<sup>8</sup>

<sup>1</sup>Consultant Physician in Rehabilitation Medicine, North Staffordshire Hospital, Stoke-on-Trent, UK ; <sup>2</sup>Head of the Department of Neurology, Clinic for Neurorehabilitation, Beelitz-Hellstatten, Germany ; <sup>3</sup>Head, Movement Disorders Rehabilitation Unit, H. Valduce Rehabilitation Centre, Costamasnaga (Lecco), Italy ; <sup>4</sup>Assistant Professor in Clinical Neurology, Université de Paris V-René Descartes, France ; <sup>5</sup>Senior Consultant in Neurology, Helsingborg Hospital, Sweden ; <sup>6</sup>Chief of the Department of Neurology, Hospital Mutua Terrassa, Barcelona, Spain ; <sup>7</sup>Associate Professor of Neurology, Masaryk University, Brno, Czech Republic ; <sup>8</sup>Head of Clinic for Rehabilitation, Hôpital Erasme, Université Libre de Bruxelles, Belgium

Spasticity commonly follows damage to the central nervous system (brain and spinal cord) and presents in conditions, such as stroke, brain and spinal injury of traumatic and non-traumatic causes, multiple sclerosis, cerebral palsy and in a variety of ways depending on the size, location and age of the lesion. It is an involuntary muscle overactivity, which may have several harmful effects such as pain, deformity and impaired function.

Botulinum toxin type A is a highly effective treatment in the management of spasticity and has an innovative role where the clinical goals are focal. There is now considerably well documented experience of its use and knowledge of its indications, effects and safety in clinical practice.

At a European level there are differences in the management of spasticity from one country to another, particularly in the provision of services. However, there are some basic recommendations on the use of BTX-A in spasticity, which are applicable to all patients and will help promote best practice.

A panel of European specialists who have extensive clinical experience on the use of BTX-A in spasticity recently reviewed the wide body of clinical evidence to develop the following recommendations :

- Spasticity management is a multi-disciplinary activity and should only be undertaken where appropriate personnel and facilities are available.
- Before using BTX-A, the team must ensure that an appropriate rehabilitation management programme is in place and available post-injection.
- Patients should be selected for BTX-A treatment depending on the pattern of their spasticity, the dynamic spastic component, clearly identified

goals of treatment and their ability to meet those goals.

- Before treatment is given, patients and their families and carers should be given appropriate information and should agree with the treatment goals.
- Targeted intramuscular injections of BTX-A must only be given by clinicians with experience in diagnosis and management of spasticity, which includes appropriate knowledge of functional anatomy, and clinical dosing regimens.
- Following an injection of BTX-A it is possible to achieve an optimal clinical benefit only with a programme of exercise, muscle stretch and/or splinting.
- BTX-A is currently commercially available as BOTOX<sup>®</sup> (Allergan) and Dysport<sup>®</sup> (Ipsen). These two preparations are different and one unit of BOTOX<sup>®</sup> is not the same as one dose of Dysport<sup>®</sup>. A proven dose ratio has not been established.
- The clinical team should formally evaluate the outcome of treatment.
- Whilst the management of spasticity is a long-term process, a defined period of BTX-A treatment can facilitate achievement of goals.

*Note : Most clinical trials have been conducted with BTX-A. The evidence base therefore largely reflects experience with BTX-A and cannot necessarily be extrapolated to other formulations.*

Anthony B. WARD,  
North Staffordshire Rehabilitation Centre,  
Haywood Hospital,  
High Lane, Burslem,  
Stoke-on-Trent ST6 7AG.