Quality Improvement and Patient Safety

SYSTEMIC ADVERSE EVENTS AND SIDE EFFECTS FOLLOWING INTRAMUSCULAR BOTULINUM TOXIN A (BONT-A) INJECTIONS IN CHILDREN WITH CEREBRAL PALSY AND MOVEMENT DISORDERS

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Background Botulinum toxin A injections are recommended for use by NICE\(^1\) to treat spasticity in children with cerebral palsy and movement disorders.

Objectives To explore the frequency of adverse events and side effects within a Paediatric Botulinum Toxin Service.

Methods This was a retrospective review of children (aged 2 to 17 years) attending the Botulinum Toxin Service between 2016–2019. We investigated systemic adverse events (generalized weakness, lower respiratory tract infection, dysphagia and death) and side effects occurring at time of injection and at follow-up with physiotherapy, occupational therapy or medical teams.

Results 50 children underwent 93 toxin episodes. 45 children had a diagnosis of cerebral palsy (GMFCS I (9), II (12), III (6), IV (14), V (5)) and 5 had other movement disorders. 5 were excluded from analysis (1 child did not attend follow up and, 4 were excluded as follow up was not yet complete). In total, 88 toxin episodes were included.

No children were reported to have systemic adverse events. Side effects were reported in 27% (24/88) of toxin episodes. Only 2 children (2/88, 2.2%) experienced side effects at time of the injection (pain 1/88 (1.1%), distress 1/88 (1.1%)).

The most common side effects experienced at follow-up was bruising (12/88, 13.6%) GMFCS I(1), II(3), III(5), IV(3)). Other reported side effects included pain (11/88, 12.5%) GMFCS I(2), II(2), III(4), IV(3), flu-like symptoms (6/88, 6.8%) GMFCS I(1), II(1), III(1), IV(2), V(1)), localised weakness (4/88, 4.5%) (all GMFCS I-III), and skin problems (2/88, 2.27%) (GMFCS I-III). There were no reported urinary or bowel problems and no increase in seizure frequency in children with epilepsy.

Conclusions No systemic adverse events were noted in our local Botulinum Toxin Service over a three-year period. Most of the side effects reported were minor and self-limiting. This data is in line with recent national and international studies. These results support that botulinum toxin injections are a safe intervention for tone management in children with cerebral palsy/movement disorders.

REFERENCE