AMERICAN ACADEMY OF
NEUROLOGY

Assessment: Botulinum neurotoxin for the treatment of spasticity (an evidence-based review)

Case Presentation

A 14-year-old girl is brought to the neurology clinic for a consultation by her parents for leg spasticity. This patient was born after a 30 week gestation and has spastic diplegia. Her parents are having difficulty with bathing and dressing her because of progressive thigh adductor spasticity. She is wheelchair bound. The pediatricians have tried clonazepam and high dose baclofen without success. She has no other medical problems. She has not had prior surgeries. She is on no medications. She has no know drug allergies. She does not smoke or drink. There is no family history of neurological disease. On physical examination vitals are 116/68, HR 60 and regular, and RR 12. She is thin and in no acute distress. She is alert and follows simple commands. She can use about 10 words and can express discomfort. Cranial nerve testing reveals difficulty with visual fixation, eye movements are full, and facial sensation is symmetric. Her mouth is open and she is able to close it on command. Hearing is intact. Palate/tongue and uvula are midline. Sternocleidomastoid is 5/5 bilaterally. Motor strength is 5-/5 throughout the upper extremities; legs are 3/5 bilaterally, with decreased bulk, and marked lower extremity spasticity (3/4 on the modified Ashworth scale) affecting the thigh adductors in particular. Sensory function is intact to light touch and pinprick throughout. Reflexes are 2/4 in the arms, 3/4 at the knees and she has 2 beats of clonus in the ankles bilaterally. Coordination is intact to finger to finger. Coordination testing is limited in the legs by spasticity. She is unable to stand even with assistance and is sitting in the wheelchair.

1. This patient has:
A. Adductor spasticity secondary to cerebral palsy
B. Hemiplegia
C. Limb dystonia
D. Cerebellar ataxia
E. Generalized dystonia
Correct answer: A. Adductor spasticity secondary to cerebral palsy

Coding Discussion

Adductor spasticity secondary to cerebral palsy

343.0 Diplegic infantile cerebral palsy

2. Level A evidence reveals that:
A. Botulinum toxin should be offered as a treatment option for spasticity in children only
B. Botulinum toxin should be offered as a treatment option for spasticity in adults only
C. Botulinum toxin should be offered as a treatment option for spasticity in adults and children
D. Botulinum toxin should NOT be offered as a treatment option for spasticity in adults
E. Botulinum toxin should NOT be offered as a treatment option for spasticity in children
Correct answer: C. Botulinum toxin should be offered as a treatment option for spasticity in adults and children.

Patient Safety Tip
It is important to consider the weight of the child when treating with botulinum toxin. It is advisable to initiate treatments at the lower range of the therapeutic spectrum with gradual incremental increases.

Coding Discussion
64612 Chemodenervation of muscle(s); muscle(s) innervated by facial nerve (eg, for blepharospasm, hemifacial spasm)

64613 Chemodenervation of muscle(s); neck muscle(s) (eg, for spasmodic torticollis, spasmodic dysphonia)

64614 Chemodenervation of muscle(s); extremity(s) and /or trunk muscle(s) (eg, for dystonia, cerebral palsy, multiple sclerosis)

+95874 Needle electromyography for guidance in conjunction with chemodenervation (List separately in addition to code for primary procedure)

J0585 Botulinum toxin type A, per unit

J0587 Botulinum toxin type B, per 100 units

Evaluation and Management

99243 Office consultation new or established patient	• Detailed history and exam and • Low complexity MDM

As the present case is written, the highest code that could be assigned is 99243 or a level 3 outpatient consultation. The history and examination are only detailed, and the Medical Decision Making (MDM) is only moderate. The history is missing a 10 bullet ROS, the neurological examination shows only 19 bullets, and the medical decision making is moderate. Thus higher coding is limited by the lack of a 10 bullet ROS and a 23 bullet neurological examination.

To raise to a level 4 consultation (99244), one would need to add a 10 bullet ROS and 4 more facts in the neurological examination. The latter could be accomplished by adding a cardiac examination, a funduscopic examination, and 2 more facts in the mental status examination. If these changes were made, the history and examinations would be comprehensive and the MDM would be Moderate leading to a billing level of 4. If the patient was evaluated as a new patient rather than a consultation, the proper code would be 99203 for the present case and 99204 if the history and examination were augmented to comprehensive.

It is important to realize that one can never bill for a higher level than 3 in the Neurological Single System examination unless a 5 bullet mental status examination is completed.

Disclaimer
This statement is provided as an educational service of the American Academy of Neurology. It is based on an assessment of current scientific and clinical information. It is not intended to include all possible proper methods of care for a particular neurologic

problem or all legitimate criteria for choosing to use a specific procedure. Neither is it intended to exclude any reasonable alternative methodologies. The AAN recognizes that specific patient care decisions are the prerogative of the patient and the physician caring for the patient, based on all of the circumstances involved.

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