

Assessment: Botulinum neurotoxin in the treatment of autonomic disorders and pain (an evidence-based review)

Case Presentation

A 24-year-old woman presents to the neurology clinic complaining of headache. The symptoms started three months prior to presentation and have progressed gradually over time. She reports that the headache is typically on the right side of the head is throbbing in nature and is associated with spots in her vision. The headache does not radiate. She rates the headaches as up to 9/10 in intensity. They are occurring several times a week. She has associated difficulties with light and noise sensitivity. She has nausea but no vomiting. She tries to lie in a dark room when the headache comes on. The headache is often better if she is able to get some sleep. Hunger, stress, and sleep deprivation tend to provoke the headaches. She takes acetaminophen or ibuprofen several times a week for the headaches with minimal effect. She denies a history of head or neck trauma. Her mother and sister suffer from migraines. She has no other medical problems. She has not had prior surgeries. She takes ibuprofen a few times a week and is on no other medications. She has no known drug allergies. She does not smoke or drink.

On physical examination vitals are 126/72, HR 68 and regular, and RR 12. She is well nourished and in no acute distress. She is alert and oriented, recall is 3/3 in 5 minutes, and she has no language difficulties. Cranial nerve testing reveals a normal fundoscopic examination. PERLLA, EOMI. No gaze evoked nystagmus was appreciated. She had normal saccadic eye movements. Visual fields were full. Facial sensation and motor strength were intact symmetrically. Hearing was intact bilaterally to finger rub. Palate, tongue and uvula were midline. Sternocleidomastoid was 5/5 bilaterally. Motor strength is 5/5 throughout, with normal tone and no drift. Sensory is intact bilaterally to light touch, pinprick, and proprioception. Reflexes are 2/4 throughout and toes are downgoing. Coordination is intact to finger to finger and heel to shin. Gait is narrow based and steady. The patient has normal toe, heel, and tandem testing. No carotid bruits were identified.

A review of the primary care records for the initial headache evaluation one month ago did not reveal any systemic abnormalities. An MRI of the brain performed at an outside facility was reviewed and is normal. Lab testing to include CBC, basic metabolic panel, and thyroid testing performed by the primary care physician one month prior to presentation was also reviewed and was normal.

1. This patient has:
 - A. Migraine
 - B. Tension headache
 - C. Subarachnoid bleed
 - D. Cervical dissection
 - E. Cervical strain

Correct answer: A. Migraine. This patient has classic features of migraine to include the quality, nature, intensity of the headaches. Her associated photo- and phonophobia and nausea are also characteristic.

2. Level A evidence reveals that botulinum toxin appears to be ineffective for the treatment of:

- A. Axillary hyperhidrosis
- B. Episodic migraine and chronic tension type headache
- C. Detrusor overactivity
- D. Gustatory sweating
- E. Low back pain

Correct answer: B. Episodic migraine and chronic tension type headache: The Level A evidence suggests that botulinum toxin is ineffective in the treatment of episodic migraine and chronic tension type headache.

Assessment and Plan

The patient may benefit from treatment based on the AAN evidence based guidelines for migraine treatment. Education was provided about migraines and migraine triggers. The patient was initiated on prophylactic and abortive therapies with follow-up planned for three months. >50% of the time was spent on educational counseling.

ICD-9 Coding

Migraine

The ICD-9-CM code for this would be:

346.10 Common migraine without mention of intractability

After October 1, 2008, the code title for 346.10 changes to “Migraine without aura, without mention of intractable migraine, without mention of status migrainosus.”

As of October 1, 2008 there will be significant changes to code titles and some additional codes for headache and migraine which make the ICD-9-CM codes more compatible with the *The International Classification of Headache Disorders, Second Edition*.

Discussion: No aura was mentioned in the text. The patient had been on only one class of medication, so it would be difficult to call these frequent migraines “intractable”.

E and M Level

At the case is presently written, the highest level of coding for this outpatient consultation or new patient would be: 99243 and 99203 respectively (level 3). One reason for the relatively low coding is that the neurological examination describes only 21 facts. Twenty-three facts are necessary for a comprehensive neurological examination, and a comprehensive neurological examination is needed to code for a level 4 or 5 outpatient consultation or new patient. Twenty one facts would only qualify for a detailed examination.

In addition, the history as written would only qualify as detailed, as it is missing a 10 fact or more ROS and there is no comment about Social History.

Medical Decision Making in this case is High Complexity because of the broad differential diagnosis (many possibilities) and the amount and/or complexity of data reviewed.

This patient could easily be coded as a level 5 consultation or new patient by the addition of a comment about the Social History, a 10 fact or more ROS, and 2 more facts in the Mental Status examination such as calculations, immediate or past memory, or abstract interpretation.

Patient Safety Tip

In patients who are taking large amounts of nonsteroidal anti-inflammatory (NSAID) medications it is important to quantify and document this in the medical record. It is also helpful to advise patients about the possibility of rebound analgesic headache with frequent use of NSAIDS.

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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