Dystonia

20

Aaron Jay Yang and Nitin B. Jain

Introduction

- Dystonia is a movement disorder characterized by involuntary, sustained muscle contractions causing posturing, twisting, and repetitive movements that can change in severity depending on activity and posture. This can be further classified as focal, segmental, or generalized [1].
- Dystonic movements can be triggered or exacerbated by voluntary movements or intentional movement of body parts and can last up to hours to weeks, when severe, leading to bony deformities and contractures with subsequent loss of function.
- Treatment often depends on the focality of symptoms. General dystonias may respond to medications affecting GABA transmission while techniques such as stretching, massage, and interventional modalities may be useful for focal dystonias.

A.J. Yang, MD (✉) • N.B. Jain, MD, MSPH
Department of Physical Medicine and Rehabilitation,
Vanderbilt University Medical Center,
2201 Children's Way Suite 1318, Nashville,
TN 37212, USA
e-mail: aaron.yang@vanderbilt.edu

Physical Examination

- This section will focus on a more common dystonic symptom known as cervical dystonia or torticollis.
- The goal of physical examination should be to identify the presence of cervical dystonia as the primary process, as opposed to a generalized dystonia, which may suggest other forms of dystonia such as those with a genetic etiology.
- Although abnormal head position is enough for the diagnosis, physical examination in patients with cervical dystonia must be focused on detection of "pseudodystonia" secondary to structural abnormalities. A complete neurologic examination should be performed, including strength testing, sensory deficits, and gait evaluation to exclude secondary dystonia. The presence of corticospinal, sensory, cerebellar, oculomotor, or cortical signs with cervical or extracervical dystonia suggests secondary dystonia [2].
- ***Inspection*** of head and neck posturing as well as neck range of motion in passive and active planes should be characterized and noted.
- Documentation should include tone of the neck muscles as symmetric, assymetric, or absent and a description of the muscle bulk on palpation should also be noted.
- ***Findings seen on physical examination***
  - Rotational torticollis is characterized by a slightly rotated head with nose and chin towards the shoulder on the affected side, which is the most common head and neck

R.J. Yong et al. (eds.), *Pain Medicine*, DOI 10.1007/978-3-319-43133-8_20

deviation. With simple torticollis, no head tilt is present.

- Torticollis may further be characterized by the direction of rotation defined by the chin:
  - Laterocollis—head tilts to one side with ear toward the shoulder in coronal plane while there is asymmetric tone and muscle bulk.
  - Anterocollis—head tilts forward with chin toward the chest with increased tone and bulk of the anterior cervical muscles.
  - Retrocollis—head tilts in hyperextension with increased tone and bulk of the posterior cervical muscles.
- 66–80 % of patients present with a combination of these movements [2].
- Phasic head components include:
  - Spasmodic jerks—rapid, clonic, irregular jerks with less rapid recover toward the neutral position.
  - High frequency oscillations—horizontal, vertical, mixed, or irregular tremors.
  - Of note, the terms spasmodic and spastic are misleading when describing torticollis because there is no evidence that cervical dystonia is a spastic disorder or caused by dysfunction of the pyramidal tracts [2].

Other conditions that should be considered in the evaluation of a patient with torticollis include:

- Acquired dystonia of childhood—hematoma or tumor of sternocleidomastoid muscle.
- Anterior horn disease.
- Radiculopathy.
- Cervical facet syndrome.
- C1 and C2 fractures.
- Cerebral palsy.
- Multiple sclerosis.
- Parkinson disease.
- Peritonsillar abscess.
- Retropharyngeal abscess.
- Spinal hematoma.
- Tardive dyskinesia.

Questions

- What is the most common deviation seen with cervical dystonia? Rotational torticollis, followed by head tilt, retrocollis, and anterocollis. There is no statistically significant preponderance of right or left deviation.

References

1. Braddom RL. Physical medicine and rehabilitation. San Francisco, CA: Elsevier Health Sciences; 2010. p. 51–2.
2. Frontera WR. Cervical dystonia. In: Essentials of physical medicine and rehabilitation: musculoskeletal disorders, pain, and rehabilitation. Philadelphia, PA: Saunders/Elsevier; 2008.

Suggested Reading

http://www.uptodate.com/contents/classification-and-evaluation-of-dystonia
http://emedicine.medscape.com/article/312648-overview