POSNA

The Core Curriculum

Torticollis

Objectives

1. Discuss the etiology and diagnosis, and natural history of congenital torticollis
2. List three distinct etiologies that can present as torticollis in the first year of life
3. Describe the pathology of congenital muscular torticollis
4. Describe two separate etiologies for acquired torticollis
5. Describe a treatment program for congenital muscular torticollis
6. Describe the operative treatment of congenital muscular torticollis
7. Discuss the role of ultrasound in the evaluation of congenital muscular torticollis
8. Discuss the relationship of congenital muscular torticollis to developmental dislocation of the hip

Discussion points

1. What imaging studies would be helpful for evaluation of an infant with restricted motion but no palpable contracture of the sternocleidomastoid?
2. What is Sandifer syndrome?
3. What is spasmodic congenital torticollis?
4. What central nervous system tumors can present as torticollis?
5. What are the clinical features of torticollis resulting from ocular pathology?
6. What is plagiocephaly, and what is its relationship to torticollis?

Discussion

Although torticollis is a relatively common orthopaedic problem of the infant, and most infants with torticollis do well with simple range of motion exercise; the orthopaedist must be aware of other serious conditions which can present as torticollis. In the infant, osseous abnormalities; such as Klippel-Feil syndrome, hypoplasia of the lateral mass of C1, or atlanto-occipital abnormalities can present with various combinations of head tilt or rotation. Absence of a palpable contracture of the sternocleidomastoid should alert the examiner to the possibility of an underlying osseous problem.

The etiology of congenital muscular torticollis is not established, but is presently felt to be a manifestation of a compartment syndrome of the sternocleidomastoid secondary to obstruction of venous outflow. Edema, degeneration and fibrosis of the muscle is found histologically. The prognosis is related to the degree of muscle affected and the extent of the fibrosis. The vast majority of infants will respond to stretching exercises, and there is little justification for surgical

release before at least 12 months of age. An association of congenital torticollis with developmental dislocation of the hip has been noted, with an incidence of co-existence of these entities up to 20% reported, but a recent report indicates the actual incidence may be much lower. Contractures of the hip and plagiocephaly (skull and face molding) commonly accompany congenital muscular torticollis. These conditions may result from intrauterine positioning or subsequent postural habits. Plagiocephaly is often of greatest concern to families, and probably is a result of habitually sleeping with the head on the same side.

The results of surgical release are good, even with older children, although remodeling of plagiocephaly will obviously be slower in older children. Bipolar release of the sternocleidomastoid seems to be presently favored, but good results are also attainable after unipolar release. Endoscopic division has also been reported.

Sandifer syndrome is characterized by gastroesophageal reflux and torticollis or tilting of the head, presumably an attempt on the child to be more comfortable. It may present in infancy or later childhood, usually in children with cerebral palsy.

Atypical torticollis may also be a presentation of neurogenic tumors of malformations, of which posterior fossa lesions are most common. Ocular dysfunction can also cause tilting of the head which can appear as torticollis. With ocular dysfunction, tilting the head should produce a difference in tilt as the child attempts to preserve binocularity.

Paroxysmal torticollis is an unusual self-limiting condition consisting of intermittent spasms of the sternocleidomastoid, often sproradically involving both sides. Treatment is ineffective and it usually resolves by age 2 or 3.

Atlanto-axial subluxation is a cause of torticollis in older children, and is discussed separately.

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