### Congenital Muscular Torticollis

**Background**

Congenital muscular torticollis is a postural deformity of the neck that is usually evident by two to four weeks of age. The three types of congenital muscular torticollis are postural, muscular, and sternocleidomastoid (SCM) mass. Congenital muscular torticollis may resolve spontaneously, but the incidence of spontaneous resolution is not known. Untreated persistent congenital muscular torticollis may lead to cosmetically significant craniofacial asymmetry.

**Initial Evaluation**

Typical presentation of torticollis includes lateral flexion of the neck to one side and rotation to the opposite side caused by shortening of the sternocleidomastoid muscle. Torticollis can be congenital or acquired due to intrauterine positioning, ocular muscle imbalance, or positional plagiocephaly.

**Initial Management**

The goals of treatment of congenital muscular torticollis include achievement of midline head position, symmetric posture and gross motor skills, prevention/improvement of craniofacial asymmetry, and resolution of restricted cervical range of motion. Earlier initiation of treatment is associated with increased effectiveness and shorter duration of therapy.

It is important to educate parents about the expected course of congenital muscular torticollis. It is crucial that caregivers understand factors that contribute to asymmetry and know how to safely and effectively provide the interventions.

The first-line interventions for congenital muscular torticollis include a combination of positioning and handling changes, environmental adaptations, and physical therapy interventions to facilitate passive range of motion of the neck, active range of motion of the neck and trunk, and development of symmetric posture, function, and movement.

Positioning and handling – Infants with congenital muscular torticollis can be positioned and held to facilitate passive range of motion of the neck and strengthening of the neck muscles. Positioning and handling interventions may be used to prevent or treat congenital muscular torticollis and deformational plagiocephaly. Caregivers should hold the infant so that he or she rotates the chin toward the shoulder of the affected side during feeding. Caregivers should also be instructed about the importance of prone positioning (“tummy time”) when the infant is awake and being watched by an adult. This helps stretch the SCM and strengthen the neck muscles.

Environmental adaptations – The home environment can be adapted to encourage the infant to turn the head in the direction that stretches the SCM. This includes placing the infant in the crib or on the changing table so that he or she must rotate the chin toward the shoulder of the affected side to view the room. Similarly, place toys or a mobile on the right...
### Side of a supine infant with torticollis with head/ear tilt to the right and chin rotated to the left.

Passive stretching – Passive stretching is performed to elongate the shortened SCM. These exercises are easier to perform in infants younger than two months before the neck muscles are strengthened.

Cervical spine abnormalities are the primary contraindication to stretching exercises.

### Pre-Visit Work Up

Physical exam to assess the head and neck. Congenital muscular torticollis is a postural deformity of the neck that is usually evident by two to four weeks of age. It is characterized by lateral neck flexion (head tilted to one side) and neck rotation (chin pointed to the opposite side).

### When to Refer

A referral for physical therapy is dependent on the age of onset and severity of congenital muscular torticollis, the ability of the caregivers to perform passive stretching correctly, and the availability of a physical therapist who is experienced in treating congenital muscular torticollis.

Plan to refer infant for outpatient physical therapy if the home regiment is not successful after four to six weeks.

Other indications for referral to a physical therapist in an infant or young child with congenital muscular torticollis include:

- Instruction in or reinforcement of proper techniques for passive stretching exercises
- More severe forms of torticollis
- Age >3 months at initiation of intervention
- Need for adjunctive interventions
- Associated asymmetries or motor delays that require additional management

Indications for referral to other pediatric specialists include:

- Deformational plagiocephaly and/or craniofacial asymmetry (refer to a craniofacial team)
- Developmental dysplasia of the hip or cervical spine abnormalities (refer to orthopedic surgeon)
- Limited movement of the extraocular muscles, nystagmus, or other abnormality on eye examination (refer to ophthalmology)
- Abnormalities on neurologic examination, including macrocephaly, cranial nerve palsy, abnormal tone or strength (refer to neurology)
- SCM cyst (refer to pediatric surgeon)
### Congenital Muscular Torticollis

#### Co-management Strategy (as appropriate)

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<th>Specialist scope of care</th>
<th>Primary care scope of care</th>
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| For children with congenital muscular torticollis that is not improved after six months of first-line interventions, other causes of torticollis must be considered. These include the following:  
  - Referral to ophthalmology (in children with limited extraocular movements or nystagmus)  
  - Referral to a craniofacial team if there are findings suggestive of craniosynostosis  
  - Radiographs of the cervical spine if there are findings suggested of cervical spine abnormalities  
  - Magnetic resonance imaging of the cervical spine if there is concern for Chiari II malformation | Earlier initiation of treatment is associated with increased effectiveness and shorter duration of therapy. Educated parents about the expected course of congenital muscular torticollis. Teach parents about the home exercise program Refer to physical therapy and/or specialist if appropriate. |

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<th>Return to Primary Care Endpoint</th>
<th>Contact Information</th>
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| Successful therapy results in midline head position and full range of active and passive motion of the neck. Criteria for discontinuation of therapy include:  
  - Full passive range of motion  
  - Symmetric active movement patterns  
  - Age-appropriate motor development  
  - No visible head tilt | Fax referrals for physical therapy to our Huff Center Therapies  
Fax: (828) 213-1625  
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