

CONGENITAL MUSCULAR TORTICOLLIS

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What is Congenital Muscular Torticollis?

The sternocleidomastoid muscle is shortened. If the Right SCM was shortened. The child's head would be:

- A. Sidebent right rotated right
- B. Sidebent right rotated left
- C. Sidebent left rotated right
- D. Sidebent left rotated left



What is Congenital Muscular Torticollis?

Head tilts toward and rotates away from the shortened muscle



Congenital Muscular Torticollis

The nerve that innervates the SCM also innervates which other major muscle?

- A. Orbicularis oris
- B. Masseter
- C. Trapezius
- D. Rhomboids



Critical Thinking:

- How might this condition occur?
- What could happen to cause this either in utero or after birth?

Etiology and Pathophysiology

- Direct injury to muscle
- Ischemic injury
- Rupture of muscle
- Infective myositis
- Neurogenic injury
- Heredity factors
- Intrauterine compartment syndrome
- Postural changes

Background

- Concerns from 6 weeks old
 - 9 pounds
- Young single small framed mother
- Recommendations made by PT to caregivers
 - 30 days
- Pediatrician refusing to refer to PT
- 6 months age initial PT evaluation

What do you want to know?



Initial Evaluation

- History
 - Full term baby
 - One older sister
 - Long labor; delivered with forceps and suction
- Family desired outcomes
 - Be able to turn head in all directions
 - Be able to hold head straight
- Observation
 - Child
 - Limited use of right upper extremity
 - Curvature of spine – convexity toward left
 - Avoids turning head toward right

Initial Evaluation

- Observation
 - Mother-Child interactions
 - Doesn't like being held toward the left
 - Has more difficulty nursing on left
 - Positions used during the day
 - Bouncy chair, Boppy
 - Held a lot; hates belly
 - Environment– loud, “busy” sister

Critical Thinking

- What information do you want to collect?


Clinical Findings

- Decreased neck range of motion
 - Right cervical rotation
 - Left side bending
- Muscle tightness
 - Right SCM and Right Upper Trap
- Muscle weakness
 - Left SCM

Congenital Muscular Torticollis

If baby presents with tightness in right SCM as well as scalenus, what activities would you expect the baby to have difficulty with?

- A. Feeding/swallowing
- B. Rolling
- C. Lifting head in prone
- D. Both A and C



Clinical Findings (Cont)

- Skull and facial asymmetry
 - Plagiocephaly–
 - left occipital/parietal flattening
 - Right frontal/temporal flattening
- Age appropriate gross and fine motor skills
 - Concerns with quality
- Abnormal static and movement postures
 - Lack of midline alignment of head with torso in supine, prone, and supported sitting


Differential Diagnosis

- Non-muscular causes
 - Klippel Feil Syndrome
 - Brachial plexus injury
 - Ocular lesions
 - Sandifer syndrome**
 - Posterior fossa pathology
 - Postencephalities syndromes
 - Arnold-Chiari Malformation
 - syringomyelia

Congenital Muscular Torticollis

About 1 out of 5 children with CMT present with hip dysplasia. How would you screen for this condition?

- A. Move babies legs through hip flexion, abduction, and external rotation– feel for clicking
- B. Move babies legs through hip flexion, adduction, and internal rotation– feel for clicking
- C. Move babies legs though hip flexion only and feel for clicking
- D. None of the above



Assessment

- Practice Pattern classification
 - Muscle Performance
- Referrals
 - Orthopedic
 - GI
 - ophthalmologist

Recommendations

- Intervention goals
 - Full PROM in neck, trunk, and UE's
 - Normal antigravity strength in neck and trunk
 - Active head to trunk midline alignment
- Plan of Care
 - 2-3 times per week– Why?
 - 3 months then re-eval

How Can Physical Therapy Help?



Documentation

- Letter to orthopedic doctor regarding
 - concerns failed hip dysplasia screening test
 - Concerns with facial and cranial changes

Coordination of Care

- Orthopedic
 - Normal hip x ray ruled out hip dysplasia
 - Agreed with recommendation for Dynamic Orthotic Cranioplasty (DOC) Band
- Vision
 - Passed screening
- GI
 - Started on medication for GERD
 - Formula changes

DOC Band



Communication

- Frequent phone calls with mother
- Caregivers at childcare facility
- Monthly updates to referring doctor

If the baby is having trouble tolerating stretches what recommendations could you make to the parents?

- A. Do not cause child discomfort
- B. Give baby warm bath prior to stretches
- C. Only perform when baby is well rested
- D. Perform stretches prior to feedings

Patient Related Instructions

- Positioning
 - Sleep
 - Play
 - Car seat
- Visual motor activities
 - Crib
 - Car seat
- Massage
- Carrying techniques

Back to Sleep and Belly to Play



Procedural Interventions

- Massage and soft tissue elongation
- Visual motor stimulation for active stretching
- Positioning
 - Prone and sidelying
- Strengthening
 - Stimulate lateral neck righting toward right
- Motor development
 - Right upper extremity reaching
 - Symmetrical upper extremity play

When performing stretches the PT must monitor the baby for changes in vital signs. Which of the following would indicate the need to discontinue the stretch.

- A. Perspiration
- B. Changes in respiration rate
- C. Nasal Flare
- D. All of the above

3 month re-assessment

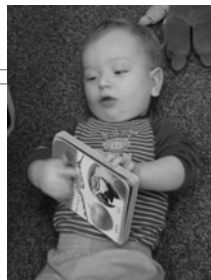
- Movement patterns
 - Avoiding trunk rotation toward right
 - Having difficulty floor to sitting
 - Having difficulty moving btwn sitting and quadruped
- Residual tilt of head toward right
- Slight restriction in rotation toward right
- Poor proprioceptive awareness of head
 - Bumping head when not wearing helmet

Changes in intervention

- Continue with massage and soft tissue work
- Crawling
 - Changes to environment b/c of pulling to stand
- Transitions into and out of sitting
- Sensory stimulation
- Continue with active stretching through positioning and visual tracking
- Continue with strengthening exercises
- PT 2 times per week

Currently

- DOC Band
 - Continue to 18 months
 - Mother decided ½ day
- Environmental changes to promote crawling
- Follow up with Specialists
- Plan to follow until about 18 months old or full range of motion achieved
- Family education about future



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