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Case Presentation: Congenital Muscular Torticollis (CMT)

Patient: 35 month old male with CMT

Examination:

Subjective: Age of Diagnosis; Prenatal, Labor and Birth History; Developmental history; Torticollis Presentation; Differential Diagnosis questions; Habitual positioning and feeding

Prenatal, Labor, and Birth History

- born at 36 weeks gestation and was 7.6 lbs. and 10 inches long
- Mother's first pregnancy and delivery
- Vaginal delivery
- Mother had Ulcerative Colitis
  - Multiple flare-ups throughout pregnancy
    - Multiple occasions of excessive blood loss
    - Had many ultrasounds
    - At a routine checkup, discovered amniotic fluid was dangerously low and induced labor
- Long and difficult labor
- Nuchal chord but not in breach position
- Physician had to pull him out, did not use forceps and did not have brachial plexus injury
- Was not breathing upon delivery
  - Mother stated that he had "died two times" but was "fine after that"
- Patient also had jaundice at birth
  - Had extended stay at hospital until this resolved

Developmental History:

- Insignificant other than torticollis
- No plagiocephaly or hip dysplasia
- Early treatment for torticollis
  - Reported that they had some therapy and that it helped a little but they stopped going and doing the stretches
- Just had his checkup with his pediatrician
  - Mother stated that he had no developmental delays and was at a "5 year old level"

Past Medical History:

- Birthing trauma
- Jaundice at birth
- Recurrent ear infections

Tubes and adenoids removed 5 months ago

Torticollis Presentation:

Stated that he tilts his head to the left and does it more when he is tired or drinking from his sippy cup

Differential Diagnosis Questions:

GERD, Spasmodic, Dystonic, Symptoms associated with ingestion of food, Epigastric pain, Hematemesis, Nystagmus, Anemia, Tortipelvis, Ataxia, Migraines, Vision problems
Answered no to all differential diagnosis questions

Habitual Positioning and Feeding

Sleeps on either side
Does not W sit
Plays standing or sitting
Mother notes that when he runs he turns his L foot out
Eats "normal food"
Takes vitamins
Ambidextrous, but physician thinks he will be left- handed

Family Goals

Mother stated that she wanted to have him checked so that he would not have any associated problems later in life

Objective: Communication; Postural observation; ROM; Palpation; Strength; Gross Motor Skills; Transfer Skills; Motor Planning Abilities

Communication

Advanced for his age
first patient to call me a doctor

Postural Observation

Often displays slight L cervical side-bending and rotation
L upper trapezius and cervical extensors more active with movement and more pronounced
No other sided differences in appearance

ROM

Assessed by playing "Simon Says"
All cervical ROM WNL except only had 80% of R cervical rotation
Shoulder, elbow WNL

Palpation

Palpated cervical musculature
Did not find any scar tissue or palpable mass in SCM

No tenderness to palpation
Normal paraspinal tone

Strength and Gross Motor Skills

Normal shrug
Assessed strength mostly through observation of play in PT gym
Could hang from balance bars
Could jump on Rebounder
Could throw ball with both hands or each hand separately
No sided-differences in strength including UEs
Normal gait
Running: ER of LLE
Can jump
Can only catch ball with both hands
Uses both arms together for play and manipulation of objects
Noted preference of use of L UE for play

Transfer Skills and Motor Planning

Uses both arms to climb up onto and scoot off of plinth
No noted motor planning difficulty

Evaluation

Assessment:

Pt is a 35 month old male who presents with cervical postural abnormality: slight L SB and L rot and decreased R cervical ROM. These limitations cause patient to favor cervical motion to the L partially neglecting motion to the R. These limitations and history of birthing trauma are consistent with doctor's diagnosis of torticollis. Pt's prognosis is good: patient is not too severely limited in R cervical ROM and with education the family can position to minimize postural abnormality and decrease risk of developmental delays or abnormalities.

PT Diagnosis:

Congenital Muscular Torticollis (CMT)
PT Diagnosis Code: 723.5 Torticollis (unspecified)

APTA Practice Pattern

Pattern 4B: Impaired Posture
Pattern 4C: Impaired Muscle Performance
Pattern 4D: Impaired Joint Mobility, Motor Function, Muscle Performance, and Range of Motion Associated with Connective Tissue Dysfunction

Goals

1) Family will demonstrate ability to perform cervical stretches to 90% PT satisfaction so that patient can gain more normal cervical posture and ROM.

2) Family will verbalize proper positioning for sleep and activity so that patient can gain more normal cervical posture and ROM.
3) Family will demonstrate understanding of condition to 90% PT satisfaction so that they can better manage their son's treatment.

Prognosis

Pt's prognosis is good: patient is moderately limited in R cervical ROM and with education the family can position to minimize postural abnormality and decrease risk of developmental delays or abnormalities

Intervention

Initial Treatment:

Family educated about how to position him for play and sleep

- Have him sleep on his R side
- Position toys/food to his R side
- Hold him on your left side
- Position yourself to his R side

Plan:

Patient would have been treated 1x/wk for 2 wks
Treatment to include:

- Family education: positioning for sleeping, play, and eating and general information about condition
- Strengthening his R cervical musculature: find games in which he has to turn his head to the right

Function Outcome Assessment Tools

Used: cervical rotation and side-bending and noted his neutral head position

- These measures are used in studies to measure effects of intervention
- Specific to torticollis

Could have used other more general measures to address issues across the ICF continuum

Impairment: cervical ROM and neutral head position
Activity: Denver II
Participation: Children's Assessment of Participation and Enjoyment (CAPE)
Health related QOL: Child Health Questionnaire (CHQ)

Outcomes

Patient did not return for follow-up appointments

Other Interventions

Conservative treatment

- positioning
- AROM
- passive stretching
- Strengthening

Orthoses
- TOT collar (tubular orthosis for torticollis)

Botulin injections (more often for spastic forms)

Surgery
- Unipolar release
- Bipolar release
- Endoscopic release
- Subperiosteal lengthening

Evidence Based Practice

Passive stretching is most effective for children under 1 year of age
- Earlier treatment results in better outcomes and shorter period of therapy

For children and adults, surgical intervention is the most effective treatment
- Surgical intervention is best when the patient is over 10 years old

Sources

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Differential Diagnosis Questions for Examination of a Child with Torticollis:

Basic Questions and Questions about Prenatal, Labor, Birth and Developmental History:

How long has your child had this neck position?
If they were diagnosed with torticollis:
  When were they diagnosed
  Who diagnosed them
  Did they give a specific diagnosis
  Did they have any treatment for torticollis
  Who provided that treatment
  Was that treatment of benefit
Describe your child's neck position?
When is their neck position the worst (when they are tired, stressed,…)?

At what week of gestation was your child born?
How many times have you been pregnant and which pregnancy was this?
How many times have you delivered and which delivery was this?
Type of delivery?
Prenatal complications?
Did labor need to be induced and if so why?

Labor complications?
Breach position?
Nuchal Chord?
Did they child need to be pulled out?
If so, were forceps used?
Did the child have any extended loss of oxygen?

Birth complications?
What was the child's birth weight and length?
What was your child's APGAR score?
Were you told that your child had a brachial plexus injury?
Did you need to have an extended stay at the hospital? If so, why?
Did your child have any medical conditions present at birth?
When, if ever, were those medical treatments resolved?
What treatment did the child have for those medical conditions?

Has your child had any developmental delays?
Did your child have plagiocephaly/"flat head"?
If so, was this treated?
How was this treated?
Did this condition resolve?
When was your child's last visit to their pediatrician?
What did their pediatrician report?

Differential Diagnosis Questions:

Has your child been diagnosed with GERD (diff diagnosis for Sandifer Syndrome)?
Does your child's neck position always look the same or does it only occur in short periods throughout the day (diff diagnosis with spasmodic torticollis- usually occurs more in adults though)?
Does your child have any other odd body movements that occur (diff diagnosis for dystonic movements that can occur with Sandifer Syndrome)?
Is your child's neck position associated with their ingestion of food (diff diagnosis for Sandifer Syndrome)?
Does your child have stomach pain with eating (diff diagnosis for Sandifer Syndrome)?
Has your child ever vomited blood (diff diagnosis for Sandifer Syndrome)?
Have you been told that your child is anemic (diff diagnosis for Sandifer Syndrome)?
Does your child's trunk have a curved appearance (diff diagnosis for BPT)?
Would you describe your child as being clumsy or having difficulty moving (diff diagnosis for BPT)?
Have you ever noticed your child's eye movements to be irregular (moving from side to side rapidly) (diff diagnosis for BPT)?
Does your child complain that their head hurts (diff diagnosis for BPT)?
Have you had your child's vision checked recently (diff diagnosis for torticollis secondary to ocular lesions)?
If so, did they report any significant clinical findings (diff diagnosis for torticollis secondary to ocular lesions)?