Torticollis

Definition / Supporting Information

Torticollis (from the Latin 'twisted neck') describes a clinical picture of the head tilted to one side and rotated in such a way that the chin and face point to the contralateral side.

Torticollis can be broadly classified as Congenital or Acquired.

Keywords / also known as: neck pain, wry neck

Essential History

Ask about:

- Duration of symptoms
- Previous trauma
  - Most cases of torticollis in older children are primarily muscular in origin
    - Cervical muscle or ligament injury arising from trauma (eg, fall or road traffic accident) can cause a head tilt and unilateral neck tenderness
    - The condition can also occur on awakening as a result of awkward positioning of the neck during sleep
- Presence of fever
- Other systemic manifestations, such as:
  - Headache
  - Vomiting
  - Ataxia
- Birth history

'Red Flag' Symptoms and Signs

In the case of severe neck pain or tenderness over the vertebra(e) after trauma, evaluation should progress only after the ABCs (airway, breathing and circulations) of resuscitation has been addressed and stabilisation of C-spine achieved (until radiography can be performed to exclude the possibility of vertebral fracture or subluxation).

Look for:

- Abnormalities on neurological examination
- Severe neck pain
- Point tenderness over the vertebrae

Differential Diagnosis / Conditions

- Congenital (see Congenital Malformations)
  - Muscular torticollis (common)
  - Postural torticollis (common)
  - Sternocleidomastoid cysts / 'tumour' (common)
  - Cervical spine anomalies
    - Hemivertebra
    - Atlanto-occipital fusion
    - Klippel–Feil syndrome
  - Sprengel's deformity
  - Cystic hygroma
  - Branchial cleft cyst
  - Unilateral absence of sternocleidomastoid
- Acquired
  - Muscular (common)
    - Cervical muscle injury
    - Psychogenic torticollis
    - Benign paroxysmal torticollis
- Infectious
  - Cervical lymphadenitis (common)
  - Upper respiratory tract infection (common)
  - Dental infections (common)
  - Infections of the head and neck (Grisel's syndrome) (common)
  - Retropharyngeal abscess
  - Cervical vertebral osteomyelitis
  - Vertebral
    - C2–C3 subluxation (common)
    - Rotary subluxation (common)
    - Atlantoaxial subluxation (up to 15% of patients with Down's syndrome)
    - Atlanto-occipital subluxation
    - Cervical fractures
    - Cervical vertebral osteomyelitis
    - Acute cervical disk calcification caused by trauma or respiratory infection
- Neurological (rare)
  - Neoplasms, including cervical cord tumours and intracranial tumours
    - Ataxia is often a cardinal feature

  - Ocular torticollis caused by:
    - Paralysis of the extraocular muscles
    - Strabismus
    - Nystagmus
    - Refractive errors
  - Spasmus nutans, including acquired nystagmus, head nodding, and torticollis
  - Dystonic torticollis may follow administration of phenothiazines, carbamazepine, or phenytoin
  - Wilson's disease
  - Syringomyelia
  - Labyrinthine torticollis
  - Accessory nerve palsy
  - Brachial plexus palsy
  - Arnold–Chiari malformation
  - Soft-tissue tumour
  - Histiocytosis X (Langerhans cell histiocytosis)
- Other
  - Sandifer's syndrome is an abnormal posturing that includes torticollis and opisthotonos
    - See Gastro-oesophageal reflux [NICE guideline NG1]
  - Dermatogenic torticollis is a painful, stiff neck that results from extensive local skin lesions
  - Spurious torticollis is stiffness of the neck resulting from dental malformations and caries

Investigations

To be undertaken by non-specialist practitioners (eg, General Practitioner (GP) Team) or specialist practitioners (eg, Emergency Department / Paediatric Team(s)):

- Full blood count
  - Helpful adjuncts to diagnose torticollis caused by infection or inflammation
  - Peripheral leucocytosis
- Erythrocyte sedimentation rate
- Imaging of the cervical spine
  - In older children with findings that suggest vertebral (bony) involvement
  - In older children with persistent torticollis

To be undertaken by specialist practitioners (eg, Emergency Department / Paediatric Team(s)):

- Ultrasonography for initial evaluation

- Prompt computed tomography or magnetic resonance imaging of the head and neck in patients with neurological deficits

Treatment Approach

To be undertaken by non-specialist practitioners (eg, GP Team), or specialist practitioners (eg, Emergency Department / General Paediatric / Paediatric Surgical Team(s)) if not already done:

- Congenital torticollis
  - Prompt conservative treatment of congenital muscular torticollis during the first year of life
  - Medical management including passive and active stretching of the neck
    - Gentle (passive) stretching can be performed daily by parents
    - Active stretching – manipulate the infant's environment in such a way that objects of interest are located on the side of the room opposite to the torticollis to induce the infant to turn the neck in the desired direction
  - Surgical correction is essential if:
    - Deformity persists beyond the first year of life
    - Range of motion is restricted > 30%
    - Residual craniofacial deformity exists
  - Craniofacial asymmetry is best reversed early, when the child's growth potential is at its maximum
- Acquired torticollis
  - Treatment directed at the cause of acquired torticollis arising from other specific diseases
  - Acquired muscular or ligamentous torticollis should be managed with:
    - Local heat
    - Massage
    - Analgesics
    - Muscle relaxants may be considered
    - Soft cervical collar
  - Symptoms usually resolve in 7–10 days.
  - For drug-induced dystonic reaction:
    - Discontinue the offending drug
    - Administer intravenous procyclidine hydrochloride if needed

When to Refer

Refer to specialist practitioners (eg, Emergency Department / General Paediatric Team) if:

- Presence of craniofacial asymmetry

- Radiographic evidence of cervical spine abnormality
- > 30% restriction in range of motion
- Persistence beyond the first year of life

‘Safety Netting’ Advice

- For congenital torticollis, gentle stretching exercises should be encouraged, but if there is resistance or difficulty advise parent or carer to seek medical advice
- Cases should be followed carefully (in case of development or worsening of craniofacial deformities) so that appropriate care can be arranged
- Advise patient, parent or carer to seek medical advice if acquired muscular torticollis does not improve within 7-10 days
- New or evolving neurological symptoms (eg, weakness or altered sensation)

Patient / Carer Information

Please note: whilst these resources have been developed to a high standard they may not be specific to children.

- Torticollis (Web page), Patient

Resources

National Clinical Guidance

Gastro-oesophageal reflux disease in children and young people: diagnosis and management, NICE guideline NG1, National Institute for Health and Care Excellence.

Suggested Resources

Please note: these resources include links to external websites. These resources may not have national accreditation and therefore PCO UK cannot guarantee the accuracy of the content.

Neck pain - acute torticollis (Web page), NICE clinical knowledge summary, National Institute for Health and Care Excellence.

Do TT. Congenital muscular torticollis: current concepts and review of treatment. Curr Opin Pediatr. 2006;18(1):26-29. [PubMed]

Torticollis (Web page), eMedicineHealth, WebMD Inc.

Torticollis (Web page), KidsHealth, Nemours.

Torticollis (congenital and acquired) in children (Web page), NHS Greater Glasgow & Clyde.

Sternomastoid tumour (SMT) Child Health Information Factsheet (pdf), University Hospital Southampton NHS Foundation Trust.

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