Torticollis ("Head tilt")

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Approved by:

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See also: Cervical spine injury

Background

Torticollis = persistent tilting of the head to one side.
Not a diagnosis – clinical sign of an underlying pathology

Causes / classification:

<table>
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<tr>
<th>Congenital</th>
<th>Acquired</th>
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<td><strong>The most common cause</strong> is congenital muscular torticollis (CMT):</td>
<td>Acquired torticollis typically occurs after 4-6 months</td>
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<td>- Caused by shortening and fibrosis of the sternocleidomastoid muscle</td>
<td>Typically results from SCM or trapezius muscle injury or inflammation.</td>
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<td>- Rarer causes include cervical spine malformations, Chiari malformations and spina bifida</td>
<td>– Usually causes chin pointing towards the opposite side and ear / head tilted to the affected shoulder (as per CMT).</td>
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<td>- Associated with birth trauma or antenatal complications</td>
<td>Can also be caused by cervical muscle spasm or cervical nerve irritation</td>
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<td>- Often have facial asymmetry</td>
<td>– Other causes e.g. C1-C2 (atlantoaxial) rotary subluxation can present with SCM spasm on the side to which the chin is tilted</td>
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Present from birth but can become more noticeable after several weeks.

Red flag symptoms

- Neck stiffness / inability to extend neck
- Fever or drooling or vomiting
- Pain increasing, unremitting or disturbs sleep
- Recent trauma
- Repeated hospital attendances with persistence of symptoms
- Gait disturbance
- History of headaches or change in behaviour

Life threatening causes:

- **Retropharyngeal abscess** – fever, irritability, drooling, limitation of neck extension and using eyes only for upward gaze.
- **C-spine injury** – history of trauma, findings not typical of SCM spasm
- **CNS tumours** – posterior fossa, spinal
- Spinal epidural haematoma / suppurative jugular thrombophlebitis
**Common causes:**
- **Muscle injury or inflammation causing spasm** – contusion, spontaneous torticollis ‘wry neck’, myositis. Usually minor trauma, viral illness or no history (typically occurs on waking).
- **Acute infections with muscle spasm** – pharyngitis, cervical lymphadenitis, quinsy, URTI.
- **Atlantoaxial rotary subluxation (AARS)** – rotational displacement of C1 on C2 due to retropharyngeal oedema → ligamentous laxity. Non traumatic cause aka Grisel syndrome: 6-12 years. Minor trauma, pharyngeal surgery, secondary SCM spasm, URTI.

**Assessment**

Questions to ask:
- Onset of symptoms and duration.
- History of awkward head or neck posture for prolonged period of time e.g. playing on console game, sleep position
- Recent trauma
- Fever, drooling, sore throat, difficulty swallowing
- Symptoms associated with brain or spinal tumour e.g. headache, vomiting, ataxia, seizures, nocturnal or early morning waking, gait disturbance, back or neck pain
- Visual symptoms e.g. diplopia, photophobia,
- Birth history: birth trauma, oligohydramnios, breech presentation
- Medication history including drugs with dystonia risk profile e.g. metoclopramide

What to look for:
- Head and chin position
- CMT can be associated with a palpable mass in the sternocleidomastoid muscle, plagiocephaly, gross motor delay or hip dysplasia
- Tenderness of muscles or midline C-spine
- Range of ACTIVE neck movement – never force neck movements in children with torticollis
- Look for signs of a space occupying lesion, lymphadenopathy, or tonsillitis / otitis media
- Eye movements

**Imaging to consider – discuss with CED senior and Paediatric Radiologist**
- **Cervical spine X-ray** – persistent symptoms > 1 week, severe pain, limited range of movement after analgesia, underlying condition causing ligamentous laxity e.g. T21
- **CT neck** for retropharyngeal abscess / bony injuries
- **MRI brain** for concerns re: posterior fossa tumours / spinal malignancy / ligamentous injury
- **USS neck** in infants
Management

**Typical age and presentation for CMT**

- Reassure parents and provide education
- Refer to paediatric physiotherapy on L5
- Use blue physiotherapy referral form and email completed form to: bsu-tr.paediatricphysio@nhs.net

**Typical age and presentation for simple muscle spasm or injury**

- Provide adequate analgesia (often requires paracetamol / ibuprofen +/- morphine +/- diazepam
- Able to move neck + no concerning features or red flags
- Manage any underlying causes

**Red flags or concerning features e.g. trauma / head tilt not typical for simple muscle spasm**

- Urgent discussion with CED senior
  - Do not attempt to move neck – allow child to maintain position of comfort
  - Provide analgesia

**Consider**

- Appropriate imaging e.g. X-ray, CT, MRI
- Formal ophthalmology review at SEH
- IV antibiotics and urgent ENT review if suspecting retropharyngeal abscess
- If imaging suggestive of atlantoaxial rotary subluxation – discuss with paediatric neurosurgery at Southampton General Hospital (see C-spine injury guideline for further details)

The Paediatric Physiotherapy department have produced leaflets for exercises in CMT. Please check the Trust’s leaflet website
Notes

Causes of acquired torticollis

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<th>There are many aetiologies, including:</th>
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<td>• <strong>Musculoskeletal:</strong> muscular spasm (“wry neck”)</td>
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<td>• <strong>Infection:</strong> meningitis, cervical osteomyelitis, discitis, pneumonia, otitis media, tonsilitis, cervical adenitis, mumps, dental infection</td>
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<td>• <strong>Inflammation:</strong> intradiscal calcification, enthesopathy, juvenile arthritis, spondyloarthropathies</td>
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<td>• <strong>Malignant:</strong> posterior fossa and cervical spine tumours</td>
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<td>• <strong>Other:</strong> trauma, post head/neck surgery, ophthalmological squint, Sandifer’s syndrome, adverse drug reactions (antipsychotics, metoclopramide, amphetamines, cocaine)</td>
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Acute torticollis has a duration <6 weeks

Bibliography

2. Torticollis | Boston Children's Hospital [Internet]. [cited 2021 Nov 21]. Available from: https://www.childrenshospital.org/conditions-and-treatments/conditions/t/torticollis/