

# Torticollis

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DR PABITRA KUMAR SAHOO, ASSISTANT PROFESSOR(PMR)

The word “torticollis” itself comes from two Latin root words, “tortus” and “collum,” that together mean “twisted neck.” This condition, sometimes called **wryneck**, is relatively common in children. In general, torticollis is classified as-

- **Congenital**-present at birth
- **Acquired** -occurring later in infancy or childhood

## **Congenital muscular torticollis**

### **Aetiology**

The etiology is incompletely understood, although several theories have been postulated. Reports on the familial transmission of congenital muscular torticollis have been few. An idiopathic intrauterine embryopathy or the intrauterine development of sternocleidomastoid compartment syndrome may be responsible for the sternomastoid fibrosis. Birth trauma or intrauterine malposition is considered to be the cause of damage to the sternocleidomastoid muscle in the neck.

### **Pathophysiology**

An end-arterial branch of the superior thyroid artery supplies the middle part of the sternocleidomastoid muscle. Obliteration of this end artery may be responsible for the development of muscle fibrosis. As an alternative, primary trauma that temporarily and acutely obstructs the veins may lead to intravascular clotting in the obstructed venous tree. In infants, this clotting is evidenced by the development of a sternocleidomastoid mass.

## **Acquired torticollis**

- spasmodic (clonic)
- permanent (tonic).

### **Causes-**

- A self-limiting spontaneously occurring form of torticollis with one or more painful neck muscles is by far the most common ('stiff neck') and will pass spontaneously in 1–4 weeks. Usually the sternocleidomastoid muscle or the trapezius muscle is involved. Sometimes draughts, colds or unusual postures are implicated; however in many cases no clear cause is found.
- posterior fossa tumors of the skull base can compress the nerve supply to the neck and cause torticollis.
- Infections in the posterior pharynx can irritate the nerves supplying the neck muscles and cause torticollis.
- Ear infections and surgical removal of the adenoids
- The use of certain drugs, such as antipsychotics, can cause torticollis.
- Antiemetics - Neuroleptic Class –Phenothiazines

### **Clinicalfeatures**

The mass is generally 1-3 cm in diameter. It is a painless swelling in the substance of the sternocleidomastoid muscle and develops in neonates aged 2-3 weeks. In infants, the tumor is hard, and the patient's head is tilted and flexed to the side of the fibrosis. However, in older children, the tumor is less discrete than it is in younger children, and the sternocleidomastoid muscle appears thickened and shortened along its entire length. This thickening restricts rotation and lateral flexion of the neck (Figure-1). This rotation and lateral flexion of the neck is largely responsible for the gradual increase in positional plagiocephaly.

Older children compensate for the head tilt by elevating their shoulder to maintain a horizontal plane of vision. The head tilting is further compensated by twisting the neck and back, if required, to maintain a straight line of sight(Figure-2). These compensatory mechanisms do not occur in infants, who do not need to maintain a horizontal plane of vision until they stand up. Also, in older patients, muscular spasms play a role or accompany torticollis



(Figure-1)



(Figure-2)

## **Treatment**

### **Nonsurgical:**

Management for torticollis is primarily nonoperative, generally consisting of parental physiotherapy. The standard treatment for congenital muscular torticollis consists of an exercise program to stretch the sternocleidomastoid muscle. Stretching exercises include turning the baby's neck side to side so that the chin touches each shoulder, and gently tilting the head to bring the ear on the unaffected side down to the shoulder. These exercises must be done several times a day. There are other postural exercises that can be helpful. Position toys where the baby has to turn his or her head to see them. Carry the child so that he or she looks away from the limited side. Position the crib so that the child must look away from the limited side to see outside the crib.

### **Surgical treatment**

Surgical management of congenital muscular torticollis is generally avoided until the child is aged at least 1 year, until conservative methods (eg, physiotherapy) are unsuccessful, and until other differential diagnoses are excluded. . The procedure will lengthen the short sternocleidomastoid muscle by releasing the distal insertion site at sternoclavicular end, called unipolar release(Figure-3). In girls the sternal end is tried to preserve as a symbol of beauty or lengthen by Z plasty. In more elderly children, releasing distal end may not be sufficient and proximal release at occipital attachment is required, called bipolar release. Post operatively head halters traction is required to maintain the correction followed by use of a modified cervical brace(Figure-4 &5).



Figure-3

Figure-4

Figure-5