



## Ophthalmological causes of congenital torticollis

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### Abstract :

Paralysis of the 4th cranial pair is the most common cause of congenital "fixation" torticollis with typically a head tilted over the shoulder opposite the paralyzed side. Congenital monophthalmus syndrome (early loss of visual function in one eye) presents with significant convergent strabismus with fixation of the good eye in adduction. Congenital nystagmus may present with an area of lesser beat in one direction of vision, adopting an abnormal head position to improve visual function. Acquired paralysis of the other cranial pairs (III and VI) are responsible for a fixation torticollis to move away from the field of action of the paralyzed muscle. Congenital Cranial Dysinnervation Disorder" are much rarer: Duane's syndromes (dysinnervation of the VI) generally present with a head turned towards the shoulder of the paralyzed side, whereas congenital oculomotor fibrosis (dysinnervation of the III) presents with

a torticollis with the head thrown backwards associated with a ptosis. In Brown's syndrome, the child tilts the head to the affected side.

Discussion: The main explanation for congenital "fixation" torticollis is a limitation of the motility of one of the two eyes in one direction, the child adopting a head position that allows him to move away from this part of the gaze where he sees double. The other explanation in case of early strabismus or nystagmus is the improvement of vision in a specific direction of the eye. In all cases, the improvement of the head position will require the treatment of the oculomotor disorder. A complete and expert orthoptic workup should be performed in cases of congenital torticollis, in order to avoid the misunderstanding of an underlying oculomotor disorder that may be the cause.