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Congenital Muscular Torticollis: About A Case with Review of the Literature

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Case Report

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Abstract: Congenital muscular torticollis is the third neonatal deformity in terms of frequency after hip dysplasia and equinovarus foot. It is defined as an asymmetrical and permanent attitude of the head and neck in relation to the plane of the shoulders. It is due to unilateral retraction of the sternocleidomastoid muscle. Congenital torticollis is a newborn disease whose spontaneous evolution is favorable in more than 80% of cases. Its persistence beyond 4 years is rare. We present the case of a 4-year-old child who presented congenital muscle stiffness since birth with no plagiocephaly or other associated malformation. Physiotherapy aimed at muscle stretching was continued for 3 months, but in the absence of improvement, surgical release of the sternocleidomastoid muscle by unipolar tenotomy was performed.
Keywords: Congenital muscular torticollis, physiotherapy, surgical release.

INTRODUCTION

Congenital muscular torticollis is a condition in which the sternocleidomastoid muscle is shortened to the affected side. Its incidence in newborns or young children varies between 0.3% and 2%.

OBSERVATION

This is a four-year-old boy who has had a stiff neck since birth without any established treatment and whose clinical examination has found a lateral inclination of the head and a contralateral rotation of the face and chin, there was no obvious facial asymmetry. The right SCM muscle was cordiform, no mass was palpated along its entire length (Figure 1). X-rays of the cervical spine were normal.

Physiotherapy for muscle stretching was continued for 3 months, but in the absence of improvement, surgical release of the SCM muscle by unipolar tenotomy was performed (Figure 2), followed by immobilization with a cervical neck brace. Mentorial support kept for 3 months (Figure 3), with rehabilitation started as early as 15 days after the intervention.

After a follow-up of 6 months, there was a complete recovery of the movements of the head, without inclination or rigidity cervical.

DISCUSSION

The word torticolis comes from a Latin root meaning "crooked neck" [1]. It is defined as an asymmetrical and permanent attitude of the head and neck with respect to the plane of the shoulders caused most often by retraction of the sterno-cleido-mastoid muscle (SCM) [2]. SCM originating from the mastoid process of the temporal bone and occipital bone and fitting into the medial third of the clavicle and the sternal manubrium results in a contralateral rotation posture, an ipsilateral extension and inclination to the shortened muscle [3]. Torticollis are always identified by the side of the affected muscle [4].

There are several types of torticollis found in infants and toddlers. The two main types are congenital muscular torticollis and positional torticollis (also called postural). In congenital muscle torticollis, clinical examination revealed a retraction of SCM, with or without a palpable tumor, responsible for the asymmetrical spontaneous attitude and the deficit of head and neck mobility [4]. The palpable fibrous mass in the muscle is mobile and lasts and normally resorbs itself in the first year of life [5]. Postural torticollis is a reflection of excessive uterine strain manifested at birth by a global asymmetry of the newborn. This torticollis is purely positional and there is no or little retraction of the SCM [4].

Fig-1: Clinical aspect of congenital muscular torticollis in our patient

Fig-2: Intraoperative aspect of retracted sterno-cleido-mastoid muscle

Fig-3: Postoperative immobilization by a cervical collar with chin support

The etiology of torticollis is still the subject of much debate. Several hypotheses exist including poor intrauterine position, direct muscle injury, ischemic attack based on abnormal vascularization, postpartum fibrosis, muscle rupture, infectious myositis, primary myopathy of MSC, hereditary factors or intrauterine compartment syndrome [2, 6, 7]. The typical presentation is an inclination of the head to the affected side and the chin pointing to the contralateral side.

Congenital torticollis frequently presents with concomitant conditions, such as plagiocephaly, congenital hip dysplasia, club foot, and scoliosis, particularly when intrauterine misalignment is implicated in etiology. Plagiocephaly is reported in 90% of children with congenital muscle stiffness, most commonly as unilateral flattening [2]. The association between congenital muscle stiffness and congenital hip dysplasia was established at a rate of 20% in 1972 by Hummer and MacEwen [8].

Most patients diagnosed at neonatal age respond to functional therapy. When the diagnosis is late, conservative management is rarely successful, thus imposing the release of one or both heads of the SCM muscle by unipolar, bipolar tenotomy or Z-plasty.

Most of the time a distal unipolar lengthening is effective. This approach requires intensive management in post-surgery physiotherapy and wearing a cervical collar for at least 3 months. The results are generally good at the functional and aesthetic level. Even cases already with cranial deformity may benefit from surgery [9]. In the Hsu study [10], only children over one year of age who still had major clinical deficits after a minimum of 6 months of physiotherapy were referred for surgery. Cheng also recommends surgery for resistant cases after 6 months of physiotherapy [5].

CONCLUSION

The mainstay of TMC treatment is nonoperative, giving good aesthetic and functional results in more than 90% of cases. In resistant cases or in children who present after 1 year, an extension of the SCM muscle can be considered.

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