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Fibromatosis Colli a Rare Cause of Congenital Torticollis about 14-Day-Old Newborn

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Abstract **Case Report**

Fibromatosis colli or childhood tumor of the sternocleidomastoid muscle is a relatively rare cause of neonatal cervical mass. It is one of the causes of so-called congenital torticollis in newborns and infants. The etiopathogenic mechanism of its occurrence is subject to controversy. Its diagnosis uses ultrasound, which reveals a characteristic thickening of the muscle. We report a case of fibromatosis colli in a 14-day-old newborn, received in consultation in the pediatric medical emergencies of Rabat children's hospital in Morocco for a left laterocervical mass and torticollis noted by the parents. We describe through our observation and a review of the literature the clinical, paraclinical and evolutionary aspects of fibromatosis colli in infants.

Keywords: Fibromatosis Colli, Sternocleidomastoid Muscle, Torticollis, Infant.

INTRODUCTION

One of the most common cervical masses seen in the neonatal period is fibromatosis colli or infantile tumor of the sternocleidomastoid muscle [1]. It results from a benign proliferation of the fibrous tissue of the sternocleidomastoid muscle, leading to localized or diffuse swelling of the muscle [2]. The etiology is unknown, but ischemia of the muscle has been suggested in connection with obstetric trauma [3]. Clinically, cervical swelling may be accompanied by a congenital torticollis, and in some cases, facial asymmetry. Medical imaging, especially ultrasound, confirms the diagnosis, eliminating other causes of the newborn's cervical masses, also assesses the extent of the swelling and monitors its development [4,5]. The course– clinical outcome of fibromatosis colli is most often favorable, often spontaneously. We report a case of fibromatosis colli in a 14-day-old newborn, received in consultation with pediatric medical emergencies at the rabat children's hospital in Morocco for a left laterocervical mass and torticollis noted by the parents.

We describe we describe through our observation and a review of the literature the clinical, paraclinical and evolutionary aspects of fibromatosis colli in infants.

CASE REPORT

A 14-day-old male newborn with an uneventful pregnancy. There was no pathological family history and no inbreeding link between the parents, born vaginally without complications, ultimately, with a weight of 3200g and with a good adaptation to extrauterine life. He consulted in medical emergencies pediatric of the Rabat children's hospital in Morocco for a left laterocervical swelling and a permanent deviation of the baby's head on the right side (figure1) noticed by the parents during his first week of life . The clinical examination found a right lateral deviation of the head with a firm, painless, non-inflammatory mass, developed at the expense of the left sternocleidomastoid muscle (Figure 2). There was no restriction of movements at the cervical level. The ultrasound performed using a linear probe of 8 MHZ noted a fusiform thickening of the left sternocleidomastoid muscle measuring 40 by 18 mm, without mass effect on the jugulocarotid vascular axes, reflecting colli fibromatosis of the left sternocleidomastoid muscle (figure3). The rest of the ultrasound examination of the neck was normal.

The clinical management consisted in A physiotherapy treatment with a rotation of the head towards the side of the lesion when the child is on the back has been proposed. No drug or surgical treatment was necessary. The evolution was favorable with a

progressive regression and a disappearance of the swelling at 7 months.

DISCUSSION

We have reported a case of left colli fibromatosis in a 14-day-old neonate who consulted for torticollis and left laterocervical swelling. Fibromatosis colli is a mildly described benign pathology [2, 6, 7], whose prevalence is estimated at 0.3 - 2% of births. The right side seems more frequently affected, in the proportions of 60 - 75%. Bilateral involvement is rare, around 2 - 8% of cases [8]. Its prevalence in Africa remains unknown for lack of scientific publications. Benign tumor according to the World Health Organization (WHO), fibromatosis colli is classified in the category of benign fibroblastic proliferations according to the 2002 WHO classification of soft tissue tumors [9]. Fibromatosis colli is a benign laterocervical swelling of the sternocleidomastoid muscle that occurs between two and four weeks of life after birth, with a vicious neck attitude [8,10]. It is located on the right in 75% of the cases and particularly affects the male sex, as in our observation [8]. Fibromatosis colli is often associated with laborious labor, even if the pathophysiological mechanism remains little known and subject to controversy [11]. Indeed, in the two cases of Tchaou et al. [6], if the notion of trauma was noted in the first case, in the second, the absence of obstetric trauma does not allow to establish the mechanism involved in the formation of fibromatosis colli. The etiologies of fibrmatosis colli still debated are related either to an intrauterine fetal malposition, or to traumas of the muscle during a laborious delivery, at the origin of a reduction in blood flow responsible for a degeneration of muscle fibers and a development of fibrosis as in the case that we report; the two mechanisms can be entangled [10,12,13]. The other causes mentioned are inheritance and infection [14]. The infectious etiology is explained by a vascular obstruction of infectious origin leading to a reduction in the perfusion of the sternocleidomastoid muscle or by a pyogenic infection of the sternocleidomastoid muscle whose contracture cannot be explained by obstetric trauma alone [15] . For heredity, it is evoked in cases of congenital family stiff necks reported in siblings without the notion of trauma being formally found [16,17]. In our case none of these factors were found. On the clinical level, the patient in general does not present any abnormality at birth, then occurs between the 14th and the 28th day, a limitation of the movements of the neck associated with a cervical swelling. The sternocleidomastoid muscle appears shortened leading to a stiff neck, with rotation of the head towards the side of the lesion [4]. This stiff neck may be absent. The sternocleidomastoid muscle is made up of 2 heads, a sternal head and a clavicular head. Both heads can be affected by this pathology [18]. Ultrasound remains the examination of choice for diagnosis, with a sensitivity of 100% [19]. It also eliminates the diagnosis of abnormal lymphadenopathy and vascular invasion and assesses the mass effect of fibromatosis colli on nearby structures [11]. It highlights a spindle thickening located in the lower two-thirds of the sternocleidomastoid muscle. The thickening can be homogeneous or heterogeneous. It can be hyper-echogenic or hypo-echogenic depending on the duration of evolution. The movements of the mass are synchronous to those of the muscle during ultrasound [4,20]. Ultrasound remains the main examination in the exploration of fibromatosis colli because of its accessibility, its relatively low cost and especially the absence of ionizing radiation in its use, as many authors point out [4,21]. If the ultrasound is not conclusive, the exploration could continue with a scanner, although this exploration exposes the child to ionizing radiation, or even by magnetic resonance imaging. The needle aspiration is indicated in case of diagnostic difficulties. It confirms the diagnosis and eliminates other congenital, inflammatory and tumor causes [22]. It highlights fibroblastic proliferation and degenerative and atrophied striated muscle fibers [22]. No one uses a biopsy to explore fibromatosis colli. Note that the exploration of fibromatosis colli should not be invasive, given that it progresses spontaneously towards recovery in four - six or four - eight months, according to the authors [23,24]. In practice, the exploration of fibromatosis colli is limited to ultrasound, as in the case we are reporting, because of its good sensitivity [19]. The treatment is generally conservative based on stretching exercises. In rare cases of persistent symptoms, surgical treatment such as an open tenotomy or mass excision may be necessary [4-6, 8, 25].

We used motor physiotherapy as a treatment to correct the vicious attitude of the neck. The treatment of fibromatosis colli is done by the traditional method widely used in our environment or in some cases by physiotherapy. Indeed, in the series of Abdur-Rahman et al. in 15 cases, the traditional method of carrying the newborn on the back with the side facing the affected side has been shown to be effective in the management of children with fibromatosis colli [7]. The evolution of HR occurs even in the absence of treatment, towards spontaneous regression in 4 to 6 months [26], sometimes even much earlier at 3 months of age [25]. This spontaneous evolution can be facilitated and / or accelerated by physiotherapy which for our cases consists of encouraging mothers to continue a technique of carrying babies on the back traditionally used in our environment.

CONCLUSION

Fibromatosis colli is rare, its frequency in Africa and Morocco remains to be established. Its diagnosis is based on the clinic and ultrasound which eliminates other causes of torticollis in newborns and infants. Physiotherapy allows rapid and spontaneous regression of the lesion in 3-4 months.

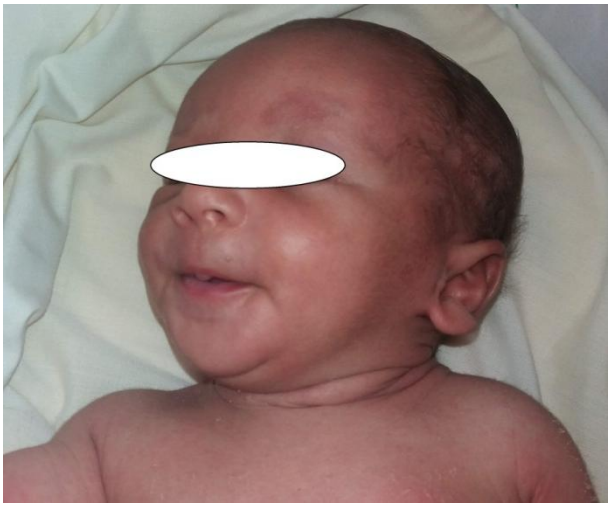

Fig-1: Image showing a deviation of the head to the right side

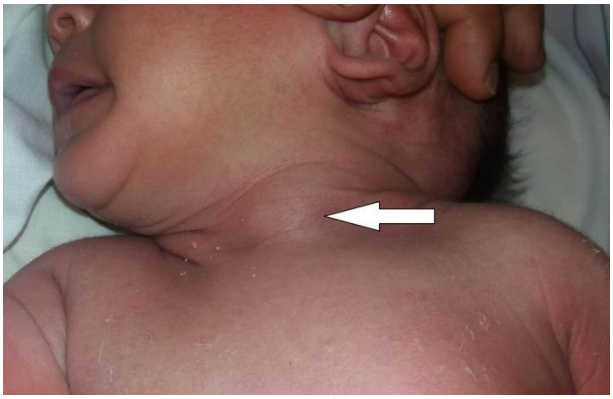

Fig-2: Image showing left cervical swelling

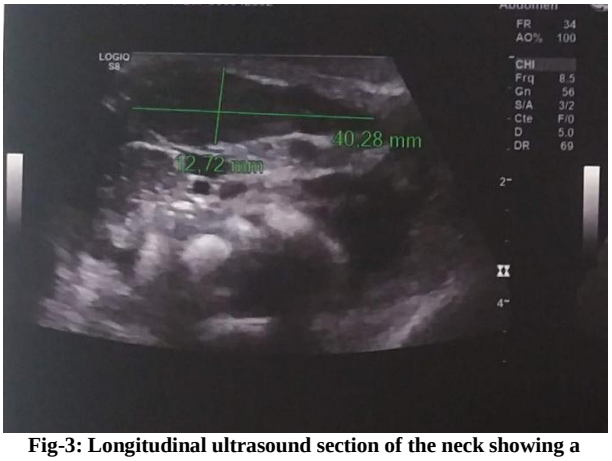

Fig-3: Longitudinal ultrasound section of the neck showing a fusiform thickening of the sternocleidomastoid muscle

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