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Case Report

Fibromatosis colli: a rare case report

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ABSTRACT

Fibromatosis colli, a rare benign congenital mass of the sternocleidomastoid muscle, is mainly found in the neonatal age group, often at the age of 2 to 4 weeks of life. Also known as a pseudo tumour, its aetiology is still unknown and may occur due to injury of the sternocleidomastoid muscle in the last trimester of intrauterine life or during delivery. Frequently manifests as restriction of neck movement and enlarging neck mass at around 14-28 days after birth. Ultrasonography (USG) neck is the preferred diagnostic modality. Treatment is mainly conservative consisting of observation and stretching exercises. Surgical intervention is required in <10% of cases and consists of a tenotomy of the sternocleidomastoid muscle. We present a case report of fibromatosis colli in a 15-day-old female neonate with a history of birth trauma presented with a right neck mass and torticollis, diagnosed using high-frequency ultrasound. This condition regressed in the next few months while the patient was instituted only conservative treatment. Thus, signifying the importance of clinical diagnosis and differentiation from other causes of neck masses to prevent unnecessary investigation and overtreatment.

Keywords: Fibromatosis colli, Cephalohematoma, Benign tumor of neonate

INTRODUCTION

Fibromatosis colli is a rare benign mass-like lesion in the sternocleidomastoid muscle, also known as a pseudo tumour or congenital muscular torticollis.[1] The World health organisation classified fibromatosis colli as a fibroblastic proliferation with a benign nature.[3]

It usually presents as a palpable lump in the neck along with restriction in head movements or head tilt, often at the age of 2 to 4 weeks of life.[2] It has an estimated prevalence of 0.4% and is usually a benign and self-regressing condition.[2]

Moreover, males are generally more affected than females and right-sided lesions are more commonly observed.[4]

The exact aetiology is unknown but the most plausible explanation is the ischemia and sometimes the fibrosis secondary to neck muscle injuries, sustained during difficult or forceps-assisted delivery or due to the poor intrauterine positions.[2]

A relevant history and clinical examination is necessary to diagnose this condition along with the high-frequency ultrasound which has the preferred modality with 100% sensitivity and decreased cost in absence of radiation.

It is reported in the literature that this condition can be managed with physiotherapy and minimal investigation and invasive procedures.[5]

CASE REPORT

A 15-day-old female neonate was received in the paediatric OPD of Dr. RML hospital, New Delhi, with the complaint of swelling in the scalp and right side of the neck with difficulty in neck and head movements. The patient was a single, term, appropriate for gestational age, and vaginal forceps assisted delivery which resulted in cephalhematoma. There were no antenatal events.

On physical examination, the baby had weight, and length within normal limits and no malformations were noticed. There was a non-tender swelling in the right side of the neck located in the middle and lower third of the sternal portion of the sternocleidomastoid muscle. It was soft in consistency, normal to touch with reduced passive neck movements on the right side. The scalp swelling was non-tender, soft and fluctuant with a well-defined outline, no skin discolouration and has been regressing after appearance.

The baby was otherwise normal, feeding at the breast with normal body temperature. No other swelling or lymphadenopathy was present. The routine laboratory tests were normal. The ultrasound neck documented a fusiform soft tissue mass seen on the right side measuring 31.6×30.5×10.6 mm. The mass has well-defined regular margins and on the colour Doppler scan no colour flow is seen in it. The left sternocleidomastoid muscle appeared normal. There was no vascular invasion or bony involvement. Based on clinical and US findings, a diagnosis of fibromatosis colli was made. The patient was advised neck physiotherapy and stretching exercises. Parents were adequately counselled and advised of regular monthly follow-ups.

Figure 1: Neonate with a firm swelling in the anterolateral aspect of the neck with associated restricted neck movements.

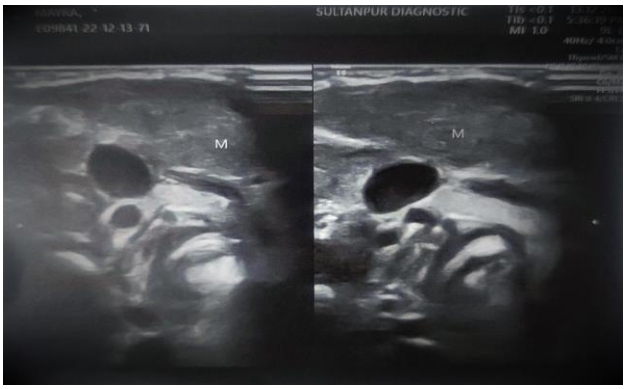

Figure 2: USG neck: fusiform enlargement of the soft tissue mass on the right sternocleidomastoid muscle measuring 31.6×30.5×10.6 mm.

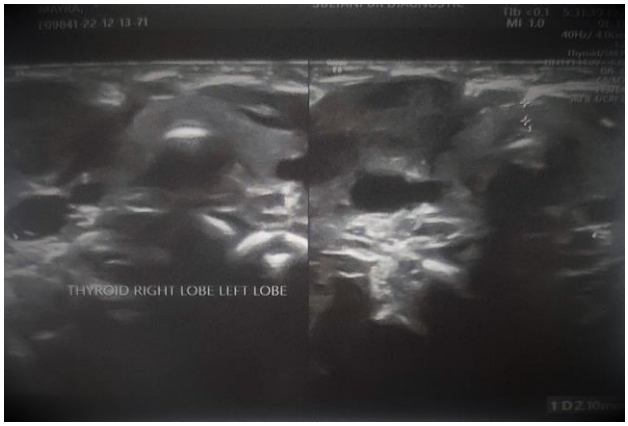

Figure 3: USG image of the neck comparison of right sternocleidomastoid muscle with normal muscle on the left.

DISCUSSION

Fibromatosis colli is a rare benign typically unilateral mass in the neck mostly right-sided with a prevalence of 0.4%.[6] Its aetiology is not adequately known, but it may occur as a fibrotic reaction to ischemia and injury of sternocleidomastoid muscle during the last trimester intrauterine position, difficult or assisted deliveries. The most likely cause in our patient seems to be difficult forceps-assisted vaginal delivery and birth trauma also resulting in cephalhematoma postnatally. The baby presented with localised scalp and right-sided neck swelling with restricted neck movements on day 15 of life. Lateral movements of the head were reduced. No other clinical anomalies were noticed. The ultrasonography (USG) scan showed a lesion typical of fibromatosis colli.

In typical cases of fibromatosis colli, the mean age of presentation is 2 to 4 weeks of age, more common on the right side (73-75%).[6,7] A non-tender soft, mobile mass is present which may increase in size for several weeks, then stabilise in size for a few months and finally diminish spontaneously by 4-8 months of age, max by 2 years. Sometimes the condition may cause torticollis.[8]

Many studies have reported, in agreement with our observation that USG is the preferred diagnostic modality because of its low cost, easy availability and lack of ionising radiation.[5]

The sternocleidomastoid muscle is diffusely enlarged in a fusiform manner and echogenicity may vary. Colour Doppler may reveal a high-resistance waveform.[9] When the clinical findings are atypical or equivocal, a computed tomography (CT) scan or magnetic resonance imaging (MRI) may occasionally be used to exclude benign neoplastic conditions such as cystic hygroma or hemangioma as well as a malignant condition such as neuroblastoma, teratoma, lymphoma and rhabdomyosarcoma.[10]

This condition is usually self-regressing and has a spontaneous nature with complete regression by the age of 2 years.[11] Treatment of fibromatosis is usually conservative with neck stretching exercises and physiotherapy, surgical interventions by tenotomy are rarely required. Surgery is indicated in cases diagnosed after the age of 6 months or in cases resistant to symptomatic treatment.[12,13]

CONCLUSION

Fibromatosis colli is a rare, unilateral benign pseudo tumour of the sternocleidomastoid muscle. Its diagnosis combines clinical clues and a USG scan which can optimally exclude other causes of torticollis in newborns and infants. It regresses spontaneously, meanwhile physiotherapy also aids.

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