

## Case Report

# Fibromatosis colli: a rare left-sided presentation in a female infant

Arthur Wong\*, Tengku Ezulia Tengku Nun Ahmad

Department of Otorhinolaryngology, University of Malaya Medical Centre, Kuala Lumpur, Malaysia

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### \*Correspondence:

Dr. Arthur Wong,

E-mail: [dr.arthurwong@gmail.com](mailto:dr.arthurwong@gmail.com)

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### ABSTRACT

Fibromatosis colli is a rare benign lesion characterised by a proliferation of fibrous tissue within the sternocleidomastoid muscle. There is a slight preponderance to affect males and it occurs more frequently on the right side of the neck. Here, we report a 6-week-old girl who presented with a swelling on the left side of her neck, opposite to usual tendencies. Ultrasonography reported a left sternocleidomastoid muscle tumour of unknown specificity. A magnetic resonance imaging (MRI) was needed to ascertain the final diagnosis of a left fibromatosis colli. She was managed conservatively and the condition resolved by the age of 1 year. In most cases, fibromatosis colli is reliably diagnosable with ultrasonography alone. MRI may be considered as an adjunct in situations where diagnostic doubts still persist.

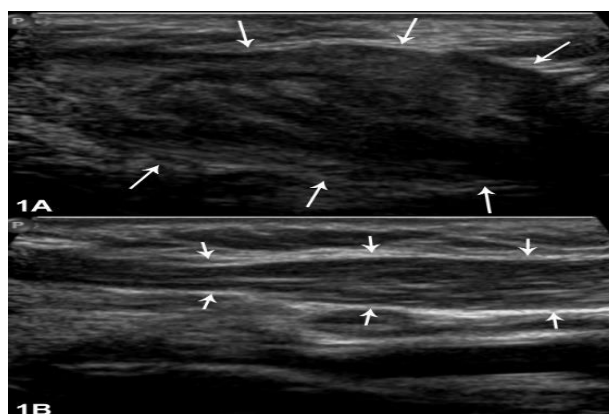
**Keywords:** Fibromatosis colli, Ultrasonography, Magnetic resonance imaging

### INTRODUCTION

Fibromatosis colli is a rare benign lesion characterised by a proliferation of fibrous tissue within the sternocleidomastoid (SCM) muscle.<sup>1</sup> It has an incidence of 0.4% with a slight preponderance to affect male infants.<sup>2</sup> It occurs more frequently on the right side of the neck (73%) compared to the left, and may present bilaterally in some cases.<sup>3</sup> Here, we report a rare presentation of fibromatosis colli found in a female with a left sided occurrence of the lesion.

### CASE REPORT

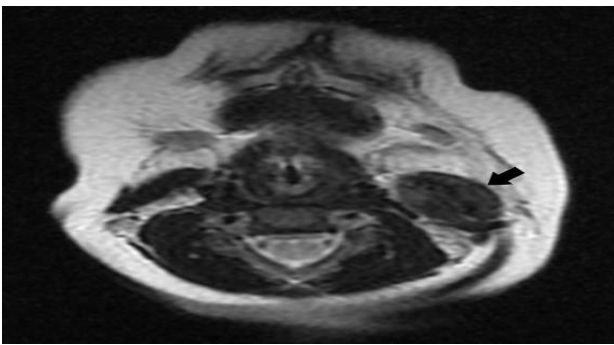
A 6-week-old girl was presented to our clinic after her parents noticed a swelling on the left side of her neck. This was accompanied with a tendency to tilt her head towards the left. Aside from that, she was feeding well and thriving. She was born at full term via a vacuum-assisted vaginal delivery with no postnatal complications. On examination, torticollis was noted. The left side of the neck had a 2×2 cm palpable mass which was firm, mobile along with the muscle plane, and not tender. Other than that, she appeared to be normal.



**Figure 1: Ultrasonography of the neck in longitudinal view. (A) Left side- heterogeneous, well-defined solid lesion within the left sternocleidomastoid muscle (long thin arrows). (B) Right side- normal right sternocleidomastoid muscle (short thin arrows).**

Ultrasonography (USG) of the neck (Figure 1) reported an encapsulated solid lesion within the left SCM muscle with peripheral vascularity seen within it and no calcifications. The right SCM muscle appeared normal. The diagnosis at

the time was of a left SCM muscle tumour of unknown specificity which led her parents to worry further. As additional evaluation was needed, a magnetic resonance imaging (MRI) of the neck was done (Figure 2). It revealed a diffuse fusiform enlargement of the left SCM muscle from its origin at the left clavicle and sternum until its insertion at the left mastoid process with a similar degree of post-contrast enhancement as the right SCM muscle. No focal lesions were seen within. Based on the clinical and radiological findings, the ascertained final diagnosis was a left fibromatosis colli. The patient was managed conservatively with physiotherapy and reassurances were given to the parents. The follow-up period observed a gradual resolution of the swelling along with a recovery of neck movement. By the age of 1 year, the condition had resolved fully.



**Figure 2: T2-weighted MRI in axial view showing a low-signal-intensity fibrous mass representing a diffuse enlargement of the left sternocleidomastoid muscle (thick arrow).**

## DISCUSSION

Fibromatosis colli is also known as sternomastoid tumor of infancy. Pathophysiologically, it develops when traumatic births injure the SCM muscle and lead to edema, degeneration of the muscle fibres, and subsequently fibrosis.<sup>3</sup> Foetal malposition and difficult delivery including instrumental delivery are the leading associated risk factors to this condition.<sup>4</sup>

Early identification is essential to prevent SCM muscle contracture and possible asymmetrical growth of the skull.<sup>4</sup> Treatment usually involves physiotherapy and most cases will resolve in 4-8 months.<sup>1</sup> Other diagnoses of paediatric neck swellings such as abscess, cystic hygroma, thyroglossal cyst, arteriovenous malformations, hemangioma, lymphadenopathy, teratoma, rhabdomyosarcoma and neuroblastoma, among others, must be excluded. USG is the modality of choice to confirm a diagnosis of fibromatosis colli. This is despite the existence of variability of its sonographic appearance.<sup>4</sup> MRI may be considered as an adjunct; however its main drawback is that the need for sedation is likely. Computed

tomography (CT) as an imaging method is possible, but concerns of radiation exposure to a young child make it less favourable.<sup>1</sup> Some clinicians advocate for fine needle aspiration cytology (FNAC) as it is quick, affordable, and provides a confirmatory diagnosis.<sup>5</sup>

In most cases, USG alone is sufficient to reach a final diagnosis. In situations like ours where doubts still persist, a secondary diagnostic tool may be required. Between MRI and FNAC, we chose the former because it is non-invasive and readily available at our centre. FNAC, even if considered a relatively safe procedure, subjects the child to pain as well as invites chances of bleeding, infection, and even repeated punctures if samplings are unsatisfactory. Excision biopsy is not recommended as it carries unnecessarily larger risks which are not worthwhile for such a benign and self-limiting condition.

## CONCLUSION

Fibromatosis colli is a rare benign lesion characterised by a proliferation of fibrous tissue within the SCM muscle. It tends to affect males and occurs more frequently on the right side of the neck. Presentation variations do occur, involving both genders and neck lateralities. In most cases, it is diagnosable with USG alone. MRI may be considered as an adjunct in situations where diagnostic doubts still persist. FNAC too may be a valid option depending on clinical judgement.

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