



Case Series

## Case Series of Rare Sternocleidomastoid Tumor of Infancy (Fibromatosis Coli): Highlighting the Role of Imaging with Emphasis on Ultrasonography

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### ABSTRACT

Sternocleidomastoid tumor of infancy, also known as fibromatosis coli, is a benign fibroblastic lesion affecting the sternocleidomastoid muscle, typically presenting within the first few weeks of life. Although uncommon, it remains a crucial differential diagnosis in infants presenting with congenital neck masses or torticollis. We present a case series evaluating the clinical and radiological findings, with emphasis on the appropriateness and pivotal role of ultrasonography (USG) in early diagnosis, follow-up and management planning (Zawin et al., 1990; Soyer et al., 1998).

Male more than female ratio noted when it comes to the incidence of the disease, which usually presents unilaterally. Ultrasonography of neck is the imaging modality of choice and management in most cases is physiotherapy. Here, four cases are listed where fibromatosis was diagnosed using ultrasonography.

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### INTRODUCTION

- **Definition:** Fibromatosis coli is a rare, self-limiting fibroproliferative condition involving the sternocleidomastoid muscle in neonates and infants.
- **Incidence:** Occurs in 0.4% to 1.3% of live births (Oh et al., 2001).
- **Etiopathogenesis:** Postulated to result from birth trauma or ischemic injury leading to fibrotic replacement within the muscle (Yilmaz et al., 2006).
- **Clinical Presentation:** Painless, fusiform neck mass with or without associated torticollis; usually presents within the first 3–8 weeks of life (Lee et al., 2006).

### OBJECTIVE OF THE CASE SERIES:

To illustrate the spectrum of imaging findings in sternocleidomastoid tumor of infancy and to underscore:

- The **appropriate use of imaging modalities.**
- The **central role of high-resolution ultrasonography** in early and definitive diagnosis.

- Importance of imaging in **differentiating fibromatosis coli from other neck masses** (Bianchi & Martinoli, 2007).

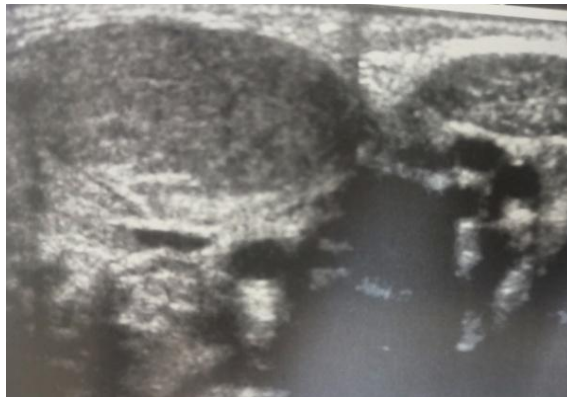
#### CASE SUMMARY:

##### Case 1 -



- 27 days old female neonate born to a primi para at 39 weeks of gestation with breech presentation after prolonged labour.
- H/o an enlarging Rt sided neck swelling.
- Examination revealed a firm and non-tender swelling on the Right side of the neck. There was no overlying erythema. There was a mild torticollis without facial asymmetry.
- USG revealed- diffusely enlarged Right Sternocleidomastoid muscle with a 2.3 x 1.3 x 1.5 cm sized, fusiform shaped heterogeneously hypoechoic focal lesion having indistinct margins. No abnormal vascularity seen in the lesion.

##### Case 2 -



- 21 days old female neonate of Primi Para at 40 weeks gestation via a vacuum delivery following induction of labour.
- Ultrasonography of the neck showed an iso to hypoechoic fusiform area in the right sternocleidomastoid muscle, measuring 2.4 x 1.3 x 1.4 cm. There was no internal vascularity. Left sternocleidomastoid muscle was normal on sonography.
- Physiotherapy was advised for the patient.
- On follow-up review after six weeks, the swelling was markedly reduced in size on Ultrasonography and had a slightly hyperechoic appearance.

##### Case 3 -



- A 29 days old male Infant born to a primipara at 38 weeks gestation with breech presentation , was brought by parents with an enlarging left sided neck swelling.
- Examination revealed a firm and non-tender swelling on the left side of the neck. There was no overlying erythema. There was a mild torticollis without facial asymmetry.
- USG revealed- diffusely enlarged thickening of left sternocleidomastoid muscle with well defined heterogeneously hypoechoic focal fusiform lesion of size 2.1x1.0x1.2 cm. No abnormal vascularity seen within the lesion.

#### Case 4



- A 1.5 months old female Infant born to a primipara at full term with cephalic presentation with delayed and difficult delivery (forceps used) , was brought by parents with an enlarging right sided neck swelling.
- Examination revealed a firm and non-tender swelling on the right side of the neck. There was no overlying erythema. There was a mild torticollis without facial asymmetry.
- USG revealed- diffusely enlarged thickening of right sternocleidomastoid muscle with well defined heterogeneously hypoechoic focal fusiform lesion of size 2.5 x 0.99 x 2.42 cm. No abnormal vascularity seen within the lesion.

#### Imaging Findings

##### Ultrasonography:

- Modality of choice due to:
  - **Non-invasiveness**
  - **No ionizing radiation**
  - **Bedside availability**
  - **High-resolution soft tissue detail** (Bianchi & Martinoli, 2007)
- Typical findings:
  - Fusiform enlargement of sternocleidomastoid muscle
  - Hypoechoic to isoechoic echotexture
  - Absence of significant internal vascularity on Doppler (Soyer et al., 1998)
  - Striated muscle pattern preserved in most cases

## DISCUSSION

- **Differential Diagnosis:** Includes lymphatic malformations, Cervical neuroblastoma, Rhabdomyosarcoma, branchial cleft cysts, hemangiomas, and neoplastic lesions. (Yilmaz et al., 2006).
- **Role of USG:** Early, accurate, and specific; distinguishes fibromatosis coli from other entities without need for sedation or contrast administration (Zawin et al., 1990; Lee et al., 2006).
- **Management:** Predominantly conservative with physiotherapy and home exercise programmes. Imaging aids in follow-up and reassurance to caregivers. In a few non responsive cases, surgical procedure may be resorted to (Soyer et al., 1998).
- **Prognosis:** Excellent, with spontaneous resolution by 6–12 months in most cases.
- Fibromatosis colli is a rare entity seen in neonates and infants with diagnosis based on Clinical and Radiological findings. Ultrasonography is the Imaging Modality of choice. Imaging findings on sonography include - Focal/diffuse enlarged sternocleidomastoid muscle with well/ill defined hypo-to-iso-to-hyperechoic mass depending on duration of mass lesion.

## CONCLUSION

Sternocleidomastoid tumor of infancy is a benign, self-limiting condition where **ultrasonography remains the cornerstone** of diagnosis and follow-up. It provides a non-invasive, safe and reliable method to assess and monitor these lesions, guiding clinicians towards conservative management and avoiding unnecessary interventions (Lee et al., 2006; Bianchi & Martinoli, 2007).

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