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# CASE REPORT

## FIBROMATOSIS COLLI: A RARE NECK DISORDER

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**INTRODUCTION:** Fibromatosis colli or pseudotumor of infancy of the sternocleidomastoid muscle is a rare benign cause of neck swelling or mass in neonate and infants. Optimal time of presentation is 1st few weeks of life. Though the exact etiology is not known, it is most likely due to birth trauma or malposition in uterus. It is one of the causes of congenital torticollis and usually recognized by mother as neck swelling with or without restricted neck movement. Ultrasonography of neck is the imaging modality of choice and sometimes MRI scan may be required to further characterize the disease and extent of involvement. Real time ultrasonography demonstrates synchronous motion of the mass with the sternocleidomastoid muscle, thus confirming the diagnosis.

**CASE REPORT:** A 4 weeks old female child was referred to radiology department for a palpable mass in left side of neck which is firm in consistency and there are no signs of any inflammation. The mass was detected by her mother at the age of 3weeks. The baby had vaginal delivery with forceps application and was breech presentation.

On ultrasound examination there was well defined heterogeneously echoic lesion notes in upper part of left sternocleidomastoid in comparison with contra lateral side.

The lesion took normal colour flow on colour Doppler application. Fibrillary structure of muscle is maintained in the lesion. There is no cervical lymphadenopathy.

On MRI examination the lesion appeared as low signal intensity in T2W images, and the lesion is localised in upper part of left sternocleido mastoid muscle.

**Figure 1:** Photograph of the Neonate with Left Sided Neck Swelling Measuring 3x2cm.

**Fig. 1**

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**Fig. A.** High frequency longitudinal USG scan shows fusiform enlargement and heterogeneous echo texture of left sternocleidomastoid muscle with maintained fibrillar structure.

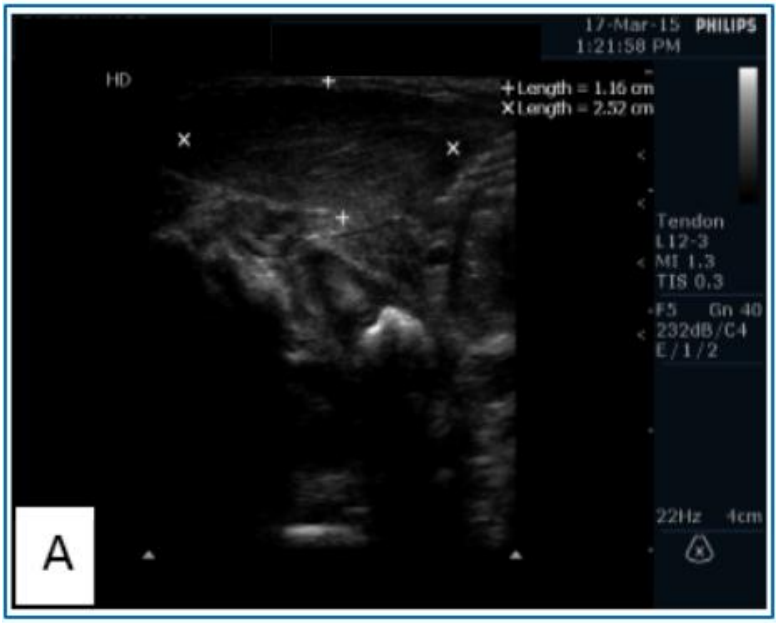


**Fig. A**

**Fig. B.** On colour Doppler application lesion taking normal colour flow.

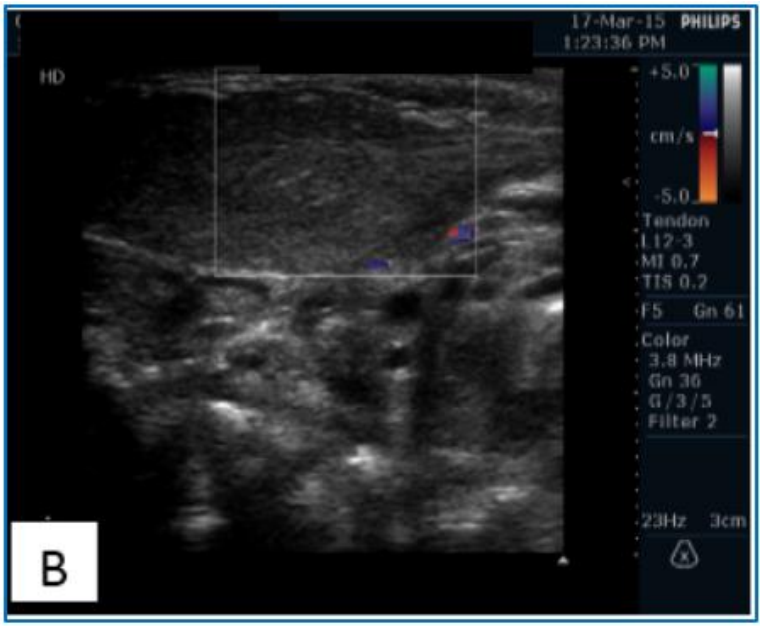


**Fig. B**

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**Fig. C and D.** Coronal and axial T2W image showing low signal intensity lesion in mid third of left stenocleido mastoid muscle.

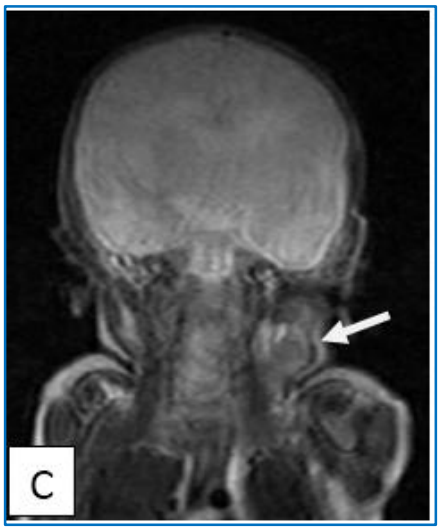


Fig. C

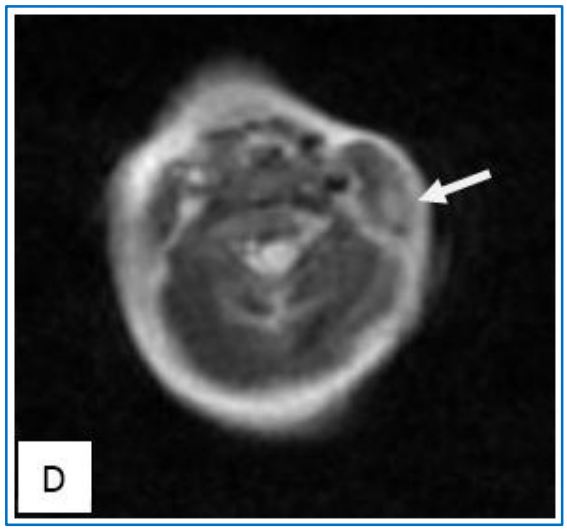


Fig. D

**DISCUSSION:** Fibromatosis colli is categorized as a benign fibroblastic proliferation, according to 2002 WHO classification of soft-tissue tumors.[1] The disease is typically unilateral, bilateral involvement is rare. Its prevalence is estimated to be 0.4% of live births. Its etiology is not known, but may represent a scar like reaction to injury of the sternocleidomastoid muscle in the last trimester of intrauterine life or during delivery.[1] It is frequently accompanied by a history of birth trauma, difficult delivery (especially forceps use) or breech delivery. The most likely cause in our patient seems to be intrauterine injury to sternocleidomastoid muscle as there is no history of birth trauma or difficult labour. The lesion almost exclusively affects the sternocleidomastoid muscle. Patients are typically normal at birth and present with restriction of neck movement and enlarging neck mass at around 14-28 days after birth. Sternocleidomastoid muscle appears shortened with fusiform thickening resulting in torticollis. This results in rotation and tilting of the head toward the side of the lesion. Facial and skull asymmetry (plagiocephaly) on the involved side are other problems that may be encountered in these patients. Gradual spontaneous resolution by the age of 2 years is seen in majority of cases.

USG, Computed Tomography (CT) and magnetic resonance imaging (MRI) all can show focal or diffuse enlargement of the sternocleidomastoid muscle, however, high frequency USG is the preferred diagnostic tool because of its easy availability, low cost and lack of ionizing radiation. It typically demonstrates fusiform thickening in the lower two-thirds of the sternocleidomastoid muscle, although the thickened muscle can be heterogeneous or homogeneous. It can be hypoechoic to hyperechoic depending on the duration of the disorder.[2] Margins are usually well defined. The lesion moves synchronously with the muscle at real-time USG. CT shows isoattenuated enlargement of the sternocleidomastoid muscle with normal surrounding fascial planes.[3] On MR imaging, the mass on T2-weighted shows increased signal intensity compared to normal muscle. On gradient recalled T1W images, the involved muscle is more hyperintense compared to T2W image, suggesting the presence of fibrous tissue within the mass. MRI is helpful not only in localizing the mass to within the

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sternocleidomastoid muscle but also confirms the absence of any airway compression, vascular encasement, lymphadenopathy or bony involvement associated with other neck masses.[4]

On cytology, there are bland appearing fibroblasts with degenerate and atrophic smooth muscle and no evidence of hemorrhage or inflammation. Collagen is seen along with a number of bland, bare nuclei and muscle giant cells in the background.[5]

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