International Journal of Medical and Pharmaceutical Research

Online ISSN-2958-3683 | Print ISSN-2958-3675
Frequency: Bi-Monthly
Website: https://ijmpr.in/

Case Series

Sternocleidomastoid tumor of infancy: Case series of a rare sonographic diagnosis

Priyanka[1], Taranjit Kaur Dhaliwal[2], Sunil Pawar[3]

[1]Assistant Professor, Department of Radiodiagnosis, DR BR Ambedkar State Institute of Medical Sciences, SAS Nagar, Punjab, India. docpriyanka.87@gmail.com

[2]Senior Resident, Department of Radiodiagnosis, DR BR Ambedkar State Institute of Medical Sciences, SAS Nagar, Punjab, India. dhaliwaltaranjit040@gmail.com

[3]Associate Professor, Department of Medicine, Government Medical College, Patiala, Punjab, India. drsunilpawar546@gmail.com

OPEN ACCESS

Corresponding Author:

Priyanka
Assistant Professor, Department of Radiodiagnosis, DR BR Ambedkar State Institute of Medical Sciences, SAS Nagar, Punjab, India.
docpriyanka.87@gmail.com

Received: 17-03-2026
Accepted: 17-04-2026
Published: 25-04-2026

ABSTRACT

Sternocleidomastoid tumor of infancy is a rare benign neck swelling seen in infancy. It is thought to be related to birth trauma or malposition in the womb. We are reporting four such cases with contrasting histories, as there was no predisposing factor present in the two cases and typical predisposing factor present in rest of the two cases. Diagnosis was made on ultrasound in both cases. As sternocleidomastoid tumor is a benign and self-limiting cause of neck swelling, it must be recognised on ultrasound at presentation, avoiding unnecessary investigation and intervention.

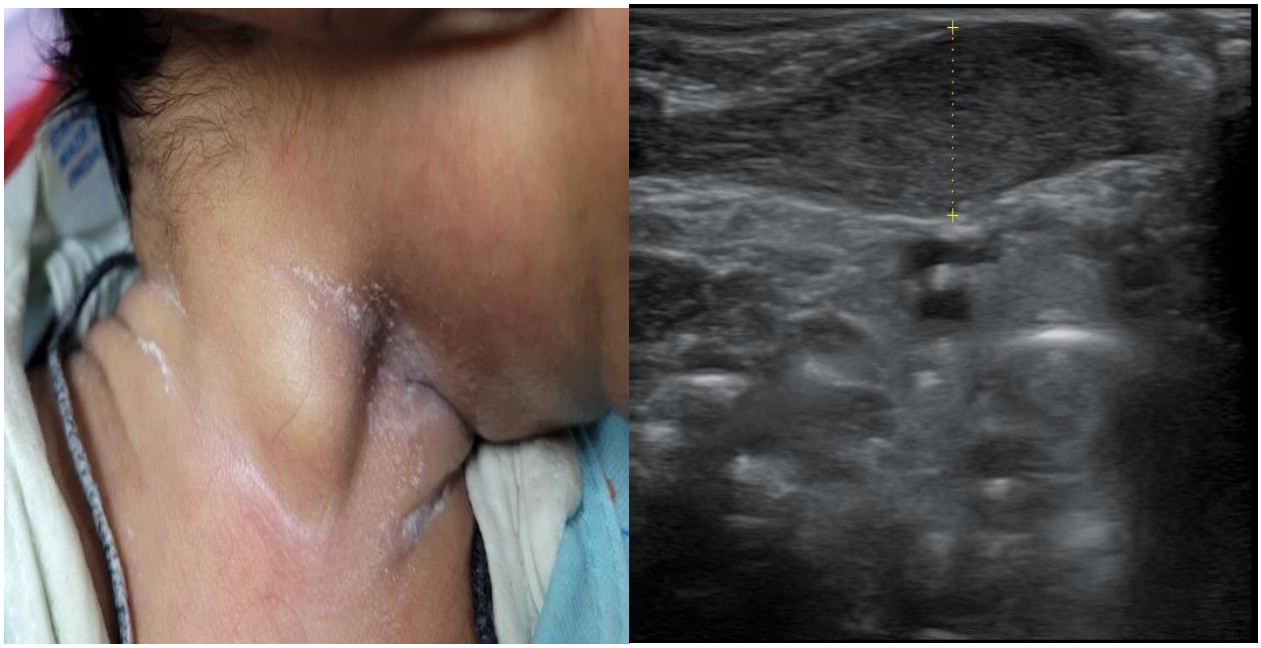
Keywords*: Sternocleidomastoid tumor of infancy, congenital muscular torticollis, infant neck swelling, ultrasound diagnosis, benign self-limiting lesion.*

INTRODUCTION

Sternocleidomastoid tumor of infancy, also known as fibromatosis colli or pseudotumor of sternocleidomastoid is a rare cause of benign neck swelling seen in infancy, incidence being 0.4%–1.3%.[1] In this report, we describe four casesof neonates with this condition who presented to our tertiary care centre's out-patient department .

CASE 1

A 14 days old male neonate presented to our OPD with a hard swelling on the right side of neck. The swelling appeared approximately 2 weeks after the birth. The baby was born at term by normal vaginal delivery. The mother did not have a history of prolonged labour or assisted vaginal delivery. Mother denied any other complaint in the baby. On examination, the baby had a 2x2 cm swelling below the body of the mandible which was more obvious on extending the neck (Figure 1). On ultrasound examination, the right sternocleidomastoid muscle was bulky and fusiform in shape with a maintained fibrillar pattern of muscle fibres with no evidence of vascularity on color doppler. Left sternocleidomastoid muscle was normal (Figure 2,3). There was no evidence of haematoma or lymphadenopathy. Based on these findings, a diagnosis of a sternocleidomastoid tumor of infancy was made. A conservative approach was planned for treatment with ultrasound monitoring on follow up. At 3 months follow up, the swelling was slightly reduced as compared to baseline scan. Chest x-ray was done to look for underlying bones which were grossly normal.



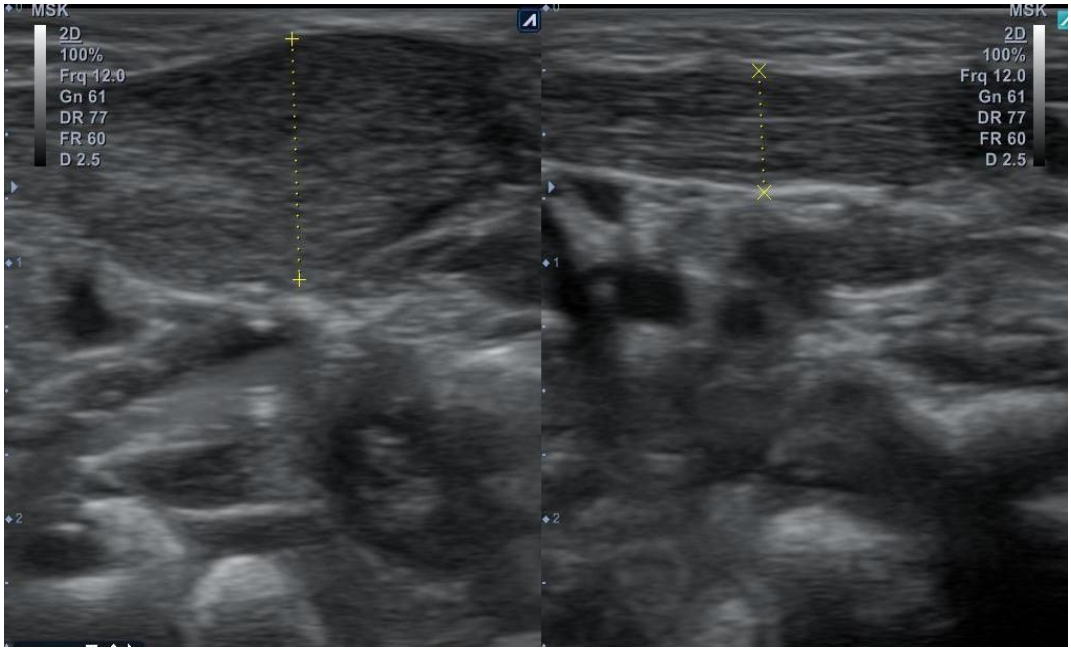
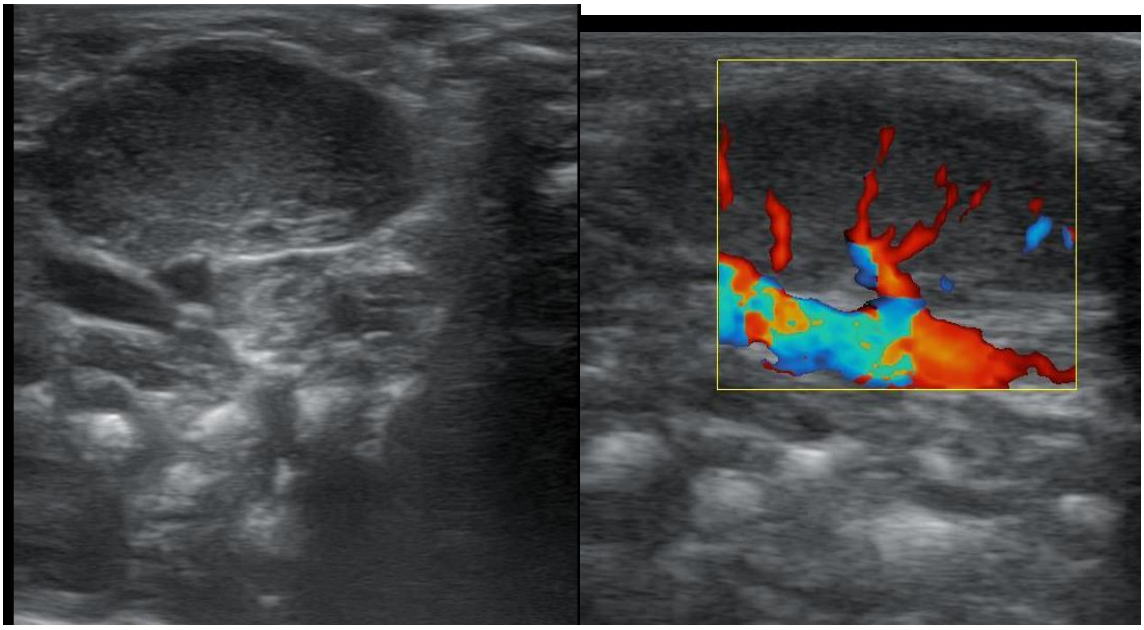


Figure 1: *Hard palpable neck swelling in the right cervical region*
Figure 2: *Ultrasound showing focal fusiform swelling of right sternocleidomastoid muscle*
Figure 3: *Ultrasound comparing thickened Sternocleidomastoid muscle on right side with normal muscle on left side*

CASE 2

A 15 days old male child presented to our OPD with a subtle swelling on the left side of the neck noticed by his mother 24 hours prior to reporting to our hospital. Antenatal ultrasounds confirmed breech presentation as stated by the mother. There was a history of prolonged labour and head being stuck for some time during delivery following which episiotomy was done. On examination, there was a small swelling palpable on the left side of the baby's neck on extension. Ultrasonography showed fusiform thickening of left sternocleidomastoid muscle(Figure4). It appeared heterogeneously echogenic compared to the right side and showed increased vascularity on color doppler(Figure5). It was almost thrice in thickness compared to normal right sternocleidomastoid muscle(Figure6).There was no evidence of cervical lymphadenopathy. Diagnosis of fibromatosis colli was made and parents were explained and reassured. Follow up ultrasound was done after 3 months which showed a decrease in thickening and vascularity.



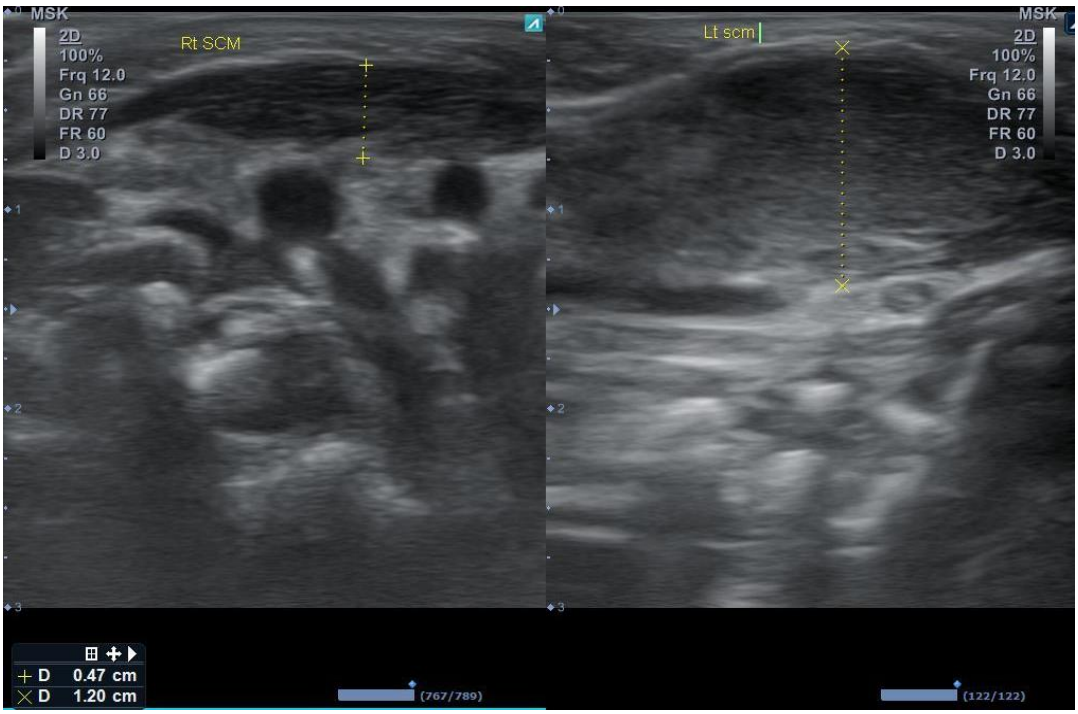


Figure 4: *Ultrasound showing fusiform thickening of left sternocleidomastoid muscle*
Figure 5: *Increased vascularity seen in bulky left sternocleidomastoid muscle*
Figure 6*: Dual image comparing right and left SCM (sternocleidomastoid muscle) along with measurements. Left SCM almost thrice the thickness of right SCM*

CASE 3

A 1-month oldmale child was referred to our department with a neck swelling on right side of neck , which was noticed by the parents 15 days back. The swelling was firm to hard in consistency with no local rise in temperature and no other signs of inflammation were present. Parents reported that the child prefers his neck to be kept on the opposite side of swelling. There was history of normal vaginal full-term delivery with no history of trauma. USG showed a focal fusiform swelling measuring 15 mm involving right Sternocleidomastoid muscle which showed fibrillar heterogenous echo texture. Left Sternocleidomastoid muscle shows normal symmetrical thickness of 5-6mm. Based on these USG features and clinical findings, a diagnosis of Sternocleidomastoid tumor of infancy was considered.

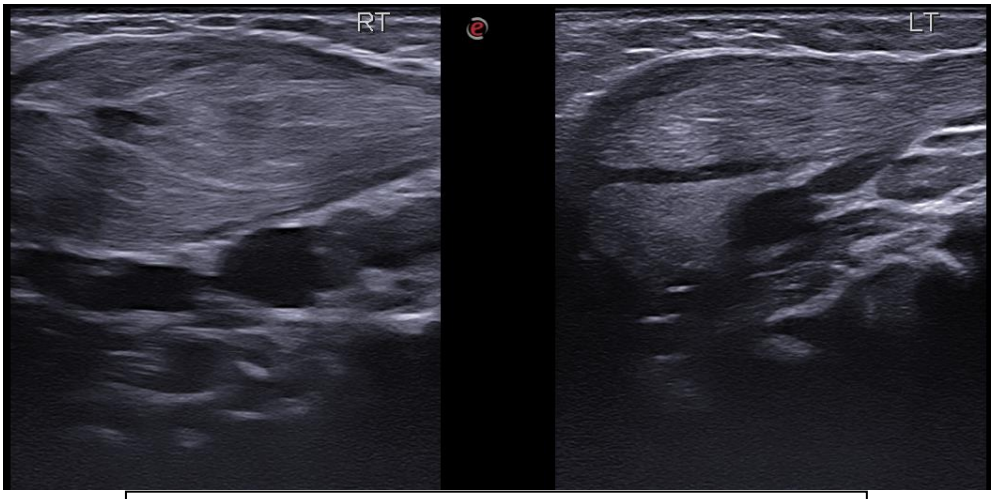


Figure 7:*Dual image comparing right and left SCM (sternocleidomastoid muscle). Right SCM is thickened and shows heterogenous echotexture*

CASE 4

A two-week-old male neonate was referred to the radiology department for evaluation of a right sided neck swelling that had been noticed by the parents since one week. The mother also noticed restricted neck movement on the affected side. On clinical examination, the swelling was firm to hard in consistency and was not warm to touch. The patient was otherwise healthy. The parents informed that the child was delivered by cesarean section for breech presentation. Ultrasonography showed a bulky right sternocleidomastoid muscle which appeared heterogenous in echotexture when compared to contralateral muscle. No significant change in internal vascularity was seen. The fibrillar structure of the muscle fibers was however maintained. There was no cervical lymphadenopathy.

DISCUSSION

Sternocleidomastoid tumor of infancy is a rare benign cause of neck swelling with slight male predominance [2] & usually presents 2-4 weeks after birth. Right sternocleidomastoid muscle is more commonly affected. It is thought to be related to birth trauma (forceps delivery, vacuum assisted delivery, prolonged/ difficult labor) or malposition in womb (e.g. breech). It may also be seen in neonates delivered by uncomplicated normal vaginal deliveries as in our case (which makes it even rarer). The cause is due to haematoma formation which leads to fibrosis in the muscle fibers. Congenital muscular torticollis is subdivided into three groups of which Group 1 (Sternocleidomastoid tumor of infancy) is the most common presentation (28.2%-47.2%). Other presentations are Muscular torticollis (group 2) and postural torticollis (group 3) which do not present with palpable mass. Some of the classification systems describe these conditions as separate diagnosis.[3] Ultrasound is the modality of choice due to low cost and absence of ionising radiation. It has 100 % sensitivity. The sternocleidomastoid muscle is diffusely enlarged to assume fusiform/ellipsoid shape. Echogenicity may vary in the affected regions. In the initial acute phases of the tumor, vascularity may be increased, which may gradually normalise on follow up scans after a few months, as seen in our case.[4] A discrete mass should not be seen separate from the muscle. It is a self-limiting condition and resolves within 4-8 months and requires no intervention other than physiotherapy. Therefore it must be recognised on ultrasound, avoiding unnecessary investigation and intervention which can increase anxiety of parents.

CONCLUSION

Sternocleidomastoid tumor of infancy is a self-limiting condition and must be recognised by radiologists by sonography to avoid unwanted further investigation and intervention.

Conflict of Interest: NIL.

Funding: NIL.

REFERENCES

1. Prabhu S, Al Abdulla AF, Abdulmaaboud MR. Right sided pseudotumor Sternocleidomastoid with left clavicle fracture.Int J App Basic Med Res 2018;8:120-1.
2. Oliveira JC, Abreu MS, Gomes FM. Sternocleidomastoid tumour in neonate: fibromatosis colli. BMJ Case rep 2018.
3. Nilesh K, Mukherji S. Congenital muscular torticollis. Ann Maxillofac Surg 2013; 3:198-200.
4. Deng, F. (2022) Fibromatosis Colli: Radiology reference article, Radiopaedia Blog RSS. Radiopaedia.org. Available at: https://radiopaedia.org/articles/fibromatosis-colli.