Manipal Journal of Medical Sciences

Volume 2 | Issue 2 Article 9

12-1-2017

Fibromatosis colli - an infrequent case of neonatal neck mass

Madhusudhan Krishnamoorthy
Department of Otorhinolaryngology and Head and Neck Surgery, Hospital Ampang, Selangor, Malaysia, kmadhu_87@yahoo.com

Ram Kumar Sharma Shanmugam
Department of Otorhinolaryngology and Head and Neck Surgery, Hospital Ampang, Selangor, Malaysia, kmadhu_87@yahoo.com

Shahrul Bin Hitam
Department of Otorhinolaryngology and Head and Neck Surgery, Hospital Ampang, Selangor, Malaysia, kmadhu_87@yahoo.com

Khairullah bin Anuar
Department of Otorhinolaryngology and Head and Neck Surgery, Universiti Sains Islam Malaysia. Negeri Sembilan, Malaysia, kmadhu_87@yahoo.com

Nur Safira binti Abdul Isa
Department of Radiology and Diagnostic Imaging, Hospital Ampang, Selangor, Malaysia, kmadhu_87@yahoo.com

Case Report

Fibromatosis colli - an infrequent case of neonatal neck mass

Madhusudhan Krishnamoorthy*, Ram Kumar Sharma Shanmugam, Shahrul Bin Hitam, Khairullah bin Anuar, Nur Safira binti Abdul Isa

Email: kmadhu_87@yahoo.com

Abstract

Fibromatosis colli presents in 0.4% of infants as a firm palpable mass in the middle or lower thirds of the sternocleidomastoid muscle.1 The typical age of presentation ranges between two to four weeks of life. It is unilateral in 75% of cases and occurs due to fibrosis within the sternocleidomastoid muscle. Although no single entity has been able to explain the etiology, birth trauma is often attributable. Ultrasonography is the initial investigation of choice. This benign condition is often treated conservatively, rarely requiring surgical intervention. Here are two cases from our centre.

Keywords: Fibromatosis colli, forceps delivery, infant, neck swelling, torticollis

Case report 1

In our first case, a 25-days-old neonate was referred to us for a right-sided neck swelling. The mother noticed that the swelling became more prominent and firm one week prior to the presentation. There was no history of fever or history of swelling elsewhere over the body. Antenatally, this pregnancy was booked at maternal's 40 years of age. The mother developed gestational diabetes mellitus in the second trimester. Intrapartum, the neonate was delivered term, with a birth weight of 3.49kg using instrumental assisted delivery (forceps assisted) due to foetal distress. Post-natally, the child was discharged home well with no documentation of any neck swelling. Examination during presentation revealed a circular, 3x2 cm swelling, over the middle third of right sternocleidomastoid. There was no torticollis. The swelling was firm in consistency with well-defined borders. It was immobile and fixed to the underlying right sternocleidomastoid. There were no cellulitic changes seen over the swelling (Figure 1).

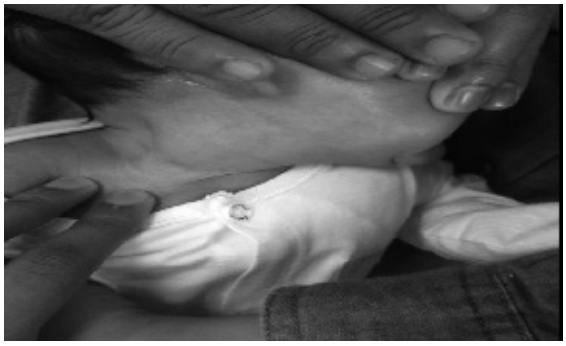

Figure 1: Firm, well defined, fixed, 3x2 cm swelling at middle third of the right sternocleidomastoid

Madhusudhan Krishnamoorthy*
Medical officer, Department of Otorhinolaryngology and Head and Neck Surgery, Hospital Ampang, Selangor, Malaysia

Ram Kumar Sharma Shanmugam
Medical officer, Department of Otorhinolaryngology and Head and Neck Surgery, Hospital Ampang, Selangor, Malaysia

Shahrul Bin Hitam
Consultant and Head, Department of Otorhinolaryngology and Head and Neck Surgery, Hospital Ampang, Selangor, Malaysia

Khairullah bin Anuar,
Consultant and Head, Department of Otorhinolaryngology and Head and Neck Surgery, Universiti Sains Islam Malaysia. Negeri Sembilan, Malaysia

Nur Safira binti Abdul Isa
Radiologist, Department of Radiology and Diagnostic Imaging, Hospital Ampang, Selangor, Malaysia

*Corresponding Author

Manuscript received: 10/10/2017 Revision accepted: 11/11/2017

How to cite this article: Krishnamoorthy M, Shanmugam R K S, Hitam S B, Anuar K B, Abdul Isa N S B. Fibromatosis colli - an infrequent case of neonatal neck mass. *MJMS.* 2017; 2(2): 49-51.

A clinical suspicion of fibromatosis colli was confirmed with an ultrasonography of the neck (Figure 2). It was reported as a heterogenous lobulated lesion originating within the right sternocleidomastoid muscle, causing fusiform dilatation of the muscle at its middle and distal third.

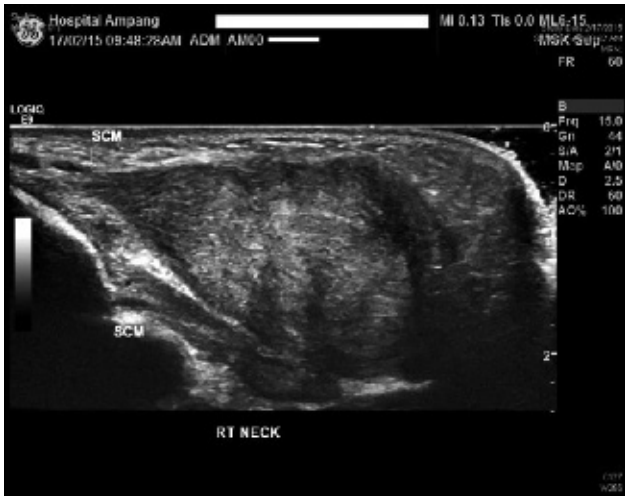

Figure 2: Heterogenous lobulated lesion measuring 3.3x1.9x2.9cm causing fusiform dilatation of the right sternocleidomastoid muscle

The diagnosis was explained to the parents and conservative treatment was offered. The neonate was monitored for three months and his symptoms resolved with physiotherapy.

Case report 2

A 31-days-old newborn was referred to us for a left sided neck swelling of two weeks duration. There was no concomitant history of fever or prior upper respiratory tract infection. The child was tolerating well orally and the only active complaint highlighted by his mother was that the child preferred to sleep with the head turned to the right for the past one week. Clinical examination on presentation revealed a 2x2 cm circular swelling, located over the left sternocleidomastoid muscle at level II. The swelling was hard in consistency, fixed to the underlying sternocleidomastoid with no overlying skin changes. A working diagnosis of fibromatosis colli was made, which was later confirmed on ultrasonography (Figure 3).

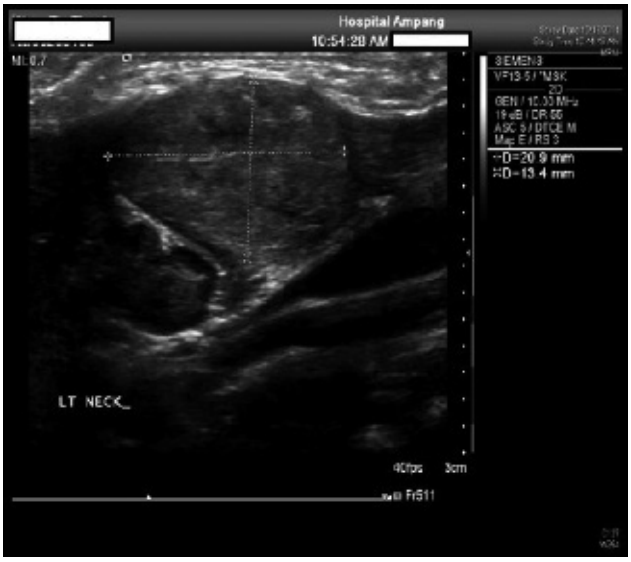

Figure 3: Heterogenous mass in the left sternocleidomastoid measuring 2.0x1.3cm. Fat plane with the surrounding structures are preserved

A structured conservative treatment approach was offered to the parents of this child and he was planned for three monthly reviews and repeat sonograms. Repeat ultrasounds revealed no increment in the size of the left sternomastoid tumour (Figure 4).

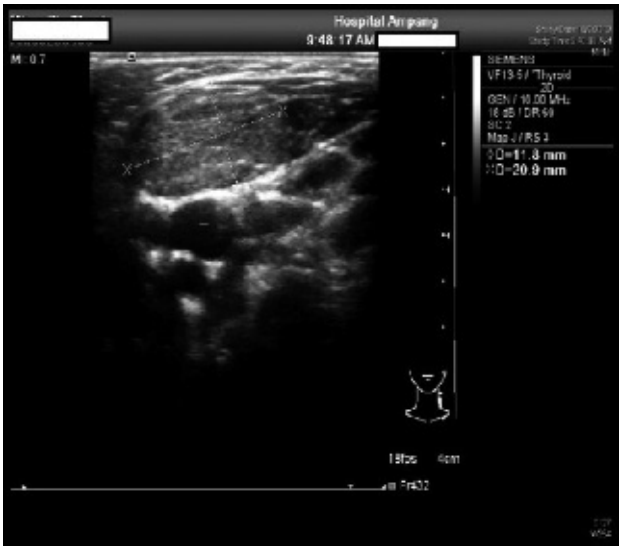

Figure 4: Repeated ultrasound showed no changes

Discussion

The term fibromatosis colli is characterized by fibrosis within the sternocleidomastoid muscle. The typical age of presentation is two to four weeks. The exact etiology is unclear, though a detailed birth history often aids to arrive at the diagnosis; a prolonged labour from intra-uterine malposition

and birth trauma (instrumental delivery), causing ischemia or tearing of the muscle fibres, have been attributed to this pathology.[2, 3] Neonates with these positive histories often have a firm palpable mass at the middle or lower third of the sternocleidomastoid that causes shortening of the affected muscle. It is worth mentioning that fibromatosis colli is the most common etiology of torticollis in pediatric practice.[4] It is unilateral in 75 % of cases, thus causing contraction of the ipsilateral sternocleidomastoid and elevation of the chin on the contralateral side (torticollis). Bilateral involvement, on the contrary, presents with a short neck and an elevated chin[5]. Ultrasonography is often the first diagnostic imaging modality performed. It will exhibit either a fusiform focal hyperechoic mass or a diffuse enlargement of the lower two-thirds of the sternocleidomastoid muscle.[6, 7] As this is a non-invasive imaging modality, the clinical course of fibromatosis colli can be documented. As such, ultrasonography serves as a useful guide in the treatment with respect to monitoring the extent of fibrotic changes. Rarely, a biopsy is needed to confirm the pathology.[4, 5]

Conclusion

In 80% of the cases, repeated active and passive exercises have shown to be an effective treatment in fibromatosis colli. We wish to highlight two such overlooked and under-reported benign lesions at our centre, both of which were successfully treated by a conservative approach.

References

1. Adamoli, Paolo, et al. Rapid spontaneous resolution of fibromatosis colli in a 3-week-old girl. Case reports in otolaryngology 2014.
2. Davids, J R, DR Wenger, and SJ Mubarak. Congenital muscular torticollis: Sequela of intrauterine or perinatal compartment syndrome. Journal of pediatric orthopedics 1992; 13 (2): 141-147.
3. Jones PG: Torticollis, in Welch KJ, Randolphs JG, Rawitch MM, et al. Pediatric Surgery. Year Book Medical. 1986; 552-556.
4. MLA Morrison, Daniel L, and G Dean MacEwen. Congenital muscular torticollis: Observations regarding clinical findings, associated conditions, and results of treatment. Journal of Pediatric Orthopaedics 1982; 2 (5): 500-505.
5. Kumar, Vijay, et al. Bilateral sternocleidomastoid tumor of infancy. International journal of pediatric otorhinolaryngology 2003; 67 (6): 673-675.
6. Hourani, Roula, et al. Fibroblastic and myofibroblastic tumors of the head and neck: Comprehensive imaging-based review with pathologic correlation. European journal of radiology 2015; 84 (2): 250-260.
7. Jer-Nan Lin and Ming-Liang Chou. Ultrasonographic Study of the Sternocleidomastoid Muscle in the Management of Congenital Muscular Torticollis. J Pediatric Surg. Nov 1997; Volume 32(11):1648-1651.