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Case Report

Infantile fibromatosis colli: torticollis with auspicious outcome

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ABSTRACT

Among the various causes of infantile torticollis fibromatosis colli (FC) is a scarce one. Although it's a benign condition it causes momentous disquiet in parents. Neck swelling with history of difficult instrument delivery is a classical allusion towards FC. Proliferation of sternocleidomastoid (SCM) muscle is the major cause. Presentation is commonly at 2-6 weeks of age with complaints of swelling or torticollis mostly unilateral, rarely bilateral. A 5-week-old male baby presented with swelling on the right side of neck and diagnosed with FC. We evaluated potential diagnostic modalities in this patient and concluded their usefulness and importance in various presentations.

Keywords: Fibromatosis colli, Sternocleidomastoid muscle, Benign fibroblastic proliferation

INTRODUCTION

Fibromatosis colli (FC) is a rare proliferation of sternocleidomastoid (SCM) muscle. Fibrous tissue within muscle proliferates either focal or in a diffuse pattern. Mostly involves the lower part. The world health organization classified it as benign fibroblastic proliferation with prevalence of 0.4% in live births.[1] More commonly involves males and right SCM then females and left SCM respectively, also called as pseudotumor of infancy or sternocleidomastoid tumor of infancy.

Usually presents at the age of 2-6 weeks of life. Most common presentation is torticollis or neck mass that mostly unilateral causing restriction of neck movement.[1]

Due to lack of distinct etiology there are many conditions linked with its occurrence like difficult instrumental delivery, fetal ischemia and fetal malpresentation or fetal malposition leading to neck muscle injury.[2]

CASE REPORT

A 5-week-old male baby presented in pediatric outpatient department (OPD) department of UIMS Prayagraj with swelling over the right side of his neck. Delivered by forceps assisted breech presentation delivery with no history of resuscitation.

He was born single, late preterm, low birth weight and small for gestational age having 1800 grams birth weight with length of 42 cm.

Mother noticed the swelling after 15 days of birth.

On examination a firm, mobile, nontender swelling with normal skin colour and temperature was felt. It has defined boundaries, slight restriction of neck movements and regressing behaviour shown in Figure 1.

On further asking the mother informed that baby was taking breast feed normally. Baby was not vaccinated till that date and lymphadenopathy was not found.

After examination, routine laboratory tests and further evaluation was planned.

High resolution ultrasound neck described a fusiform thickening and mass like lesion involving the right SCM

belly measuring 24×4 mm with some internal vascularity on colour doppler (Figure 2). It was suggestive of FC.

Figure 1: Right SCM swelling in 5-week-old infant.

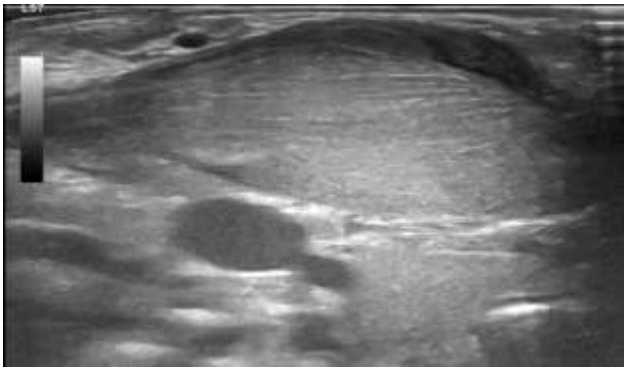

Figure 2: Diffuse isoechoic fusiform/ellipsoid enlargement within the boundaries of right SCM superior to right lobe of thyroid with minimal internal vascularity on colour Doppler, however fibrillation pattern is well maintained. The left SCM appears unremarkable.

Further, magnetic resonance imaging (MRI) neck and fine needle aspiration cytology (FNAC) was planned for further evaluation and confirmation.

MRI reported slightly ill marginated diffuse fusiform enlargement of right sternocleidomastoid muscle with thickness 20 mm compared to left side muscle thickness 9 mm.

Thickened muscle shows patchy ill-defined intramuscular hypersignal with maintained fibrillar structure. Other adjacent structures were within normal limits.

That elucidation was going towards the diagnosis of FC.

FNAC smears were moderately cellular and showed small clusters and singly dispersed spindled fibroblasts with multinucleated muscle giant cells as shown in Figures 4 and 5. Myxoid background, stripped nuclei and some small haemorrhage were also seen. No epithelioid granuloma seen.

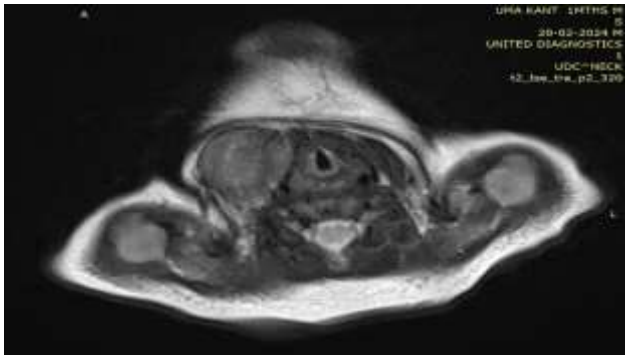

Figure 3: On MRI-neck plain, lesion was iso-intense on T1 weighted imaging and iso-hyperintense on T2/STIR imaging showing maintained fibrillar muscle structure.

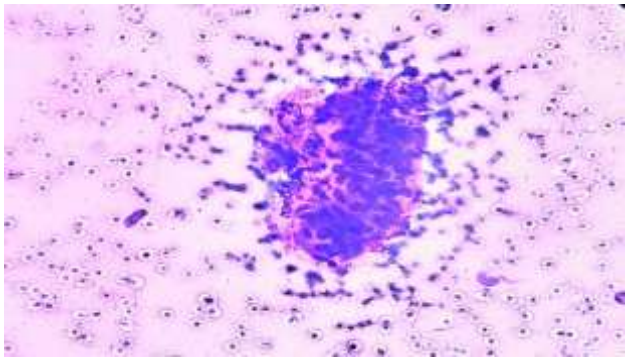

Figure 4: Clusters of spindled cells seen in FNAC (May Grunwald Giemsa stain).

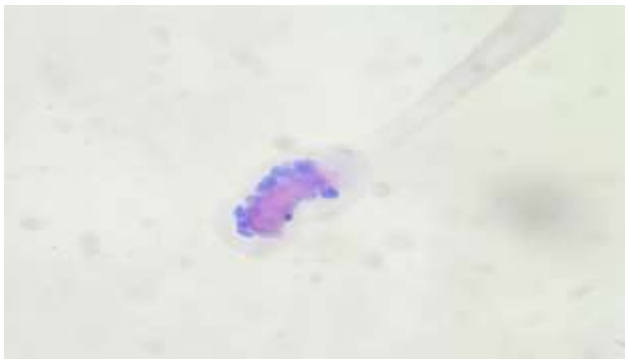

Figure 5: Multinucleated muscle giant cell seen in FNAC (Papanicolaou stain).

After confirming the diagnosis, the benign nature of the condition was explained to the attendant. Gentle muscle stretching technique was advised as conservative management. Swelling size gradually decreased on follow up visits.

DISCUSSION

The most likely reason for swelling in our patient was instrumental vaginal delivery leading to injury to SCM muscle.

High resolution ultrasound usually comes first because easy availability, no radiation hazard and early reporting.[1]

Any case in which ultrasound detect variation need to be confirmed with MRI to obviate other possible diagnosis like branchial cyst, cystic hygroma and thyroglossal cyst.[3]

Advantage of getting MRI done is that is display signal virtues and exact location of mass as well as its bony or intracranial extension.[4]

It also eliminates any kind of airway compression, vascular involvement and lymphadenopathy.[1]

Cytological features of fibromatosis colli is have been deeply studied. Its non-invasive, cost effective and confirmatory qualities makes it the first line investigation.[3]

Sharma et al frequently reported cytological features like spindled fibroblasts with multinucleated muscle giant cells.[5]

Many studies like Kurtycz et al and Zaharopoulos et al reported multiple cases concluding FNAC as one of best investigation to confirm FC.[6,7]

CONCLUSION

In a nutshell, FC is a benign proliferation in which a proper birth history is always essential. Making correct diagnosis and parent assurance is mandatory. Ultrasound, MRI and FNAC are the diagnostic modalities available. We found ultrasound as primary and FNAC as first line diagnostic investigation. We uphold MRI for the cases where other differentials are suspected. However, choice of diagnostic modality also depends on its availability and presence or absence of good birth history.

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