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# FIBROMATOSIS COLLI - A RARE PSEUDOTUMOR OF INFANCY: A CASE REPORT

Pediatrics

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## ABSTRACT

Fibromatosis colli (FC) also called as Sternocleidomastoid Tumor Of Infancy (SCMI) is a rare benign mass of neck in neonates and infants, occurring in 0.4% of live births worldwide. It presents a few weeks after birth, then stabilizes in size for few months and finally diminishes spontaneously by age of 4-8months. Clinical findings along with Fine Needle Aspiration Cytology (FNAC) and radiologic imaging, preferably Ultrasonography (USG) findings must be differentiated from other neck masses in this age group to prevent unwarranted and invasive therapeutic procedures. Physiotherapy is usually advised to speed up recovery. If diagnosed correctly and on time, undue fears of parents and unnecessary investigations can be avoided. We present a case of fibromatosis colli with diagnosis and management.

## KEYWORDS

Fibromatosis Colli, Infant, Neonate, Sternocleidomastoid Tumor Of Infancy.

## INTRODUCTION

Fibromatosis colli presents as a neck mass in neonates in relation to steromastoid muscle within first month of life[1,2] with prevalence of 0.4% of live births with male predominance[3]. Because of their rarity these tumors pose diagnostic challenges for clinicians. Fibromatosis is abnormal hyperplasia of fibrous tissue and colli means neck. It is a pseudotumor as tumor here is a misnomer and not a cancerous condition but is a congenital fibrotic process, a result of repairative process. There is diffuse enlargement of the SCM muscle usually lower two third, usually unilateral and on right side[4-6] and is rarely bilateral[7]. FC enlarges over first few months of

life and then resolves spontaneously or with physical therapy over next few months[6]. Cross sectional imaging with CT or MRI may be required in some atypical cases to know the extent of involvement and further characterize the disease. Here we present a case where fibromatosis colli was diagnosed based on clinical findings with USG findings and confirmed further by FNAC, and managed with physical therapy.

## CASE REPORT

We report the case of 1 month old female child who presented to us with swelling on right side of neck for 1 day. The child was born full term by normal vaginal delivery at local hospital with no history of difficult labour or birth trauma. Family history was unremarkable for childhood lymphoma or tuberculosis. Child was active and afebrile. On local examination a fusiform swelling of size 3x2 cm was seen in relation to lower 2/3 of right SCM. Swelling was firm, non-tender, non- pulsatile, partially mobile and not warm to touch. No other neck swelling present.

Patient was advised USG neck doppler which shows bulky and hypoechoic right SCM muscle in lower 2/3rd part with normal adjacent soft tissues. Lesion moved synchronously with SCM muscle on real time USG. No significant change in internal vascularity seen. In comparison left SCM muscle appeared normal. There was no cervical lymphadenopathy.

Based on these findings a possibility of FC was kept and to confirm it FNAC was adviced. FNAC smears showed scattered fibroblasts against a myxoid background. Also scattered muscle giant cells and bare nuclei were seen with clumps of fibromyxoid material. No mitoses/necrosis observed. Thus conforming the diagnosis of FC.

Physiotherapy was advised with massage and neck stretching exercises to be done at home. Exercises includes rotating the head of child atleast5 times towards the side of lesion and hold it there for 30sec. while stopping at least resistance from child, on twice daily basis. Swelling regressed over a period of time with complete disappearance by the age of 6 months with neck movements returning to normal.

## DISCUSSION

FC typically presents with a neck mass at 2-4 weeks of birth in relation to SCM muscle. SCM appears shortened with fusiform thickening and may result in rotation and tilting of head towards the side of lesion with chin turned to other side. Its etiology is unknown, but various theories proposed include fetal malposition, birth trauma, ischemic necrosis following vascular compression during birth, infection and presence of endogenous factors[8]. Clinical differential diagnosis include congenital lesions(branchial cyst, thyroglossal cyst), inflammatory lesions( acute or tubercular lymphadenitis),benign lesions(hemangioma, cystic hygroma) or malignant(neuroblastoma, lymphoma, rhabdomyosarcoma).

The investigation of choice is USG, as it is highly sensitive, easily available, economic and lacks harmful ionizing radiations. It shows spindle shaped homogenous/ heterogenous thickening of SCM usually in lower two-third part which moves synchronously with muscle on real time USG. No further imaging studies are necessary unless infant develops symptoms or signs that are incompatible with expected course of the condition. CT shows a homogenous diffusely enlarged SCM muscle with surrounding well preserved fat planes, with calcification at times[9,10]. MRI shows decreased signal intensity of mass on T2W images as compared to gradient recalled T1W images because of fibrous tissue[4]. The extent of involved muscle is better delineatedwith MRI than with USG.

FNAC confirms the diagnosis by showing disorganized bland appearing fibroblasts and degenerative atrophic skeletal muscle cells alongwith muscle giant cells and bare nuclei[11,12].

Treatment is mainly conservative consisting of observation, massage and neck stretching exercises. Complications may result in plagiocephaly (facial and skull asymmetry), hemifacial hypoplasia and body distortion. 90% cases have favourable evolution if treatment was initiated early[13] In case of failure of physiotherapy i.e in less than 10% of cases , surgery(tenotomy or tenomyotomy) may be indicated. Recently promising results with botulinium toxin type A were seen and may reduce surgical indications[14].

## CONCLUSION

FC is a rare cause of cervical swelling in newborns and infants. Diagnosis can be made confidently based on clinical findings, completed by USG and FNAC, thereby decreasing parent's anxiety. If diagnosed correctly it can be managed conservatively and thus avoiding unnecessary diagnostic and therapeutic maneuvers. Physiotherapy with follow up suffice in most cases. Treatment should began early to ensure better outcome.

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