Case report:

Cytodiagnosis of fibromatosis colli (FC) in a 26 days old male baby – reporting of a case of rare neck swelling

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Abstract:

Fibromatosis colli (FC) a benign spindle cell proliferation of sternocleidomastoid muscles in neck presented during neonatal age group probably due to obstetrical trauma and should differentiated from other benign and neoplastic conditions because of conservative treatment of such entity. Cytological evaluation by fine needle aspiration cytology is safe non-invasive diagnostic tool to avoid surgical intervention in neonates as well as exclusion of malignancy.

Keywords: Fibromatosis colli, neonates, neck, fine needle aspiration cytology.

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Introduction:

Fibromatosis colli (FC) of sternocleidomastoid muscle in infant is a benign spindle cell lesion was first described as “sternomastoid tumor torticollis” in German literature in 1812 by Hulbert¹ with prevalence of 0.4% of live births². This lesion is commonly presented as a neck mass occurring in around one to three months after birth following obstetric trauma. Many literatures published such entity as a single case report. Here we are reporting a single case because of rarity.

Case report:

A twenty-six days old male baby was attended in the pediatrics outpatient department of Bankura Sammilani Medical College west Bengal, India with history of left sided neck mass (Figure 1) in the beginning of March 2019. On clinical examination showed a left sided two cm nodular mass with restricted movement over lower part of the left sternocleidomastoid muscle on the third day of age. Other systemic clinical examinations were unremarkable. Obstetrics history showed third gravida mother had normal vaginal delivery of 2.75 kg baby with prolong labour in a block primary health centre. The baby was sent to the Department of Pathology for fine needle aspiration cytological examination. Ultrasound image showed a fusiform mass on the upper left sternocleidomastoid muscle with normal right side. Cytological smears showed multinucleated muscle giant cells in a background of scattered

bland looking spindle fibroblastic cells without any features of granuloma or malignancy (Figure 2). The case was diagnosed as fibromatosis colli of infancy.

Figure 1: Photograph showing left sided neck.

Discussion:

FC is a benign lesion over neck in perinatal age group in the sternocleidomastoid muscle. The affected muscle undergoes shortening leading to tilting of baby's head mostly affected from

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Figure 2: Photomicrograph showing cytological features of multinucleated giant cell with scattered spindle cells and degenerated muscle in the background (Leishman stain).

various obstetric traumas similar to the presenting case³. Lesion usually presented as congenital torticollis⁴ and needs to be differentiated from other congenital, benign and neoplastic mass in anatomical site and age group. Differential diagnosis includes branchial cyst, thyroglossal cyst, lymphatic cyst, tuberculosis and malignant lesions like rhabdomyosarcoma, lymphoma⁵.

Due to uncomfortable posture the baby may develop acquired skull deformity and difficulty in breast feeding. Thorough clinical history, physical examination, ultrasonography and CT scan study are very useful in the diagnosis of such case. Fine needle aspiration cytological examination

is important diagnostic tool as it may avoid surgical biopsy as well as differentiate from other benign and malignant lesions which help to treat such lesion conservatively. The characteristic cytological features of degenerated muscle fibers, multinucleated giant cells, and plump fibroblasts in a clear background by other authors also correlates with our presenting case⁶⁻⁹. Nodular fasciitis, infantile fibromatosis and low grade fibrosarcoma of neonates in neck are also excluded from cytological features of cellularity, atypia and cellular background. Regular physiotherapy regresses such lesion by few months to few years till school age and rarely needed surgical operation. The presenting case was followed up with regular physiotherapy successfully.

Conclusion:

Cytological examination of fibromatosis colli is a safe reliable non-invasive early diagnostic procedure for conservative treatment and can also help to avoid surgical intervention in infants as well as excluded malignant lesions.

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Ethical Approval Issue: Permission from institutional ethical committee taken.

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