Right Sided Pseudotumor Sternocleidomastoid with Left Clavicle Fracture

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Abstract
Here, we present a rare case of unilateral fibromatosis colli of the sternocleidomastoid in an infant with contralateral clavicle fracture after assisted vaginal delivery. We also try to reason that because of right sternocleidomastoid tension, the fracture in the right clavicle was avoided, and because of left‑sided clavicle fracture, left sternocleidomastoid muscle did not form pseudotumor as there was release of tension in these muscle fibers after fracture.

Keywords: Birth injury, clavicle fracture, fibromatosis colli, perinatal, pseudotumor sternocleidomastoid

Introduction
Fibromatosis colli or pseudotumor sternocleidomastoid is a rare cause of benign neck swelling in infancy, incidence being 0.4%–1.3%. The clavicle is the most commonly fractured bone during assisted vaginal deliveries in neonates, incidence being 0.41%–10%. This is the second case reported with one‑sided sternocleidomastoid pseudotumor and other side clavicle fracture; to the best of authors’ knowledge, the basic reason behind this was not put forward in that article which we tried to do in this case report.

Case Report
A 1‑month‑old baby boy presented to ear, nose, and throat clinic with complaints of right‑sided neck swelling since birth. The baby was born at term by assisted vaginal delivery with vacuum. Soon after, the birth baby was noticed to have left clavicle fracture which was managed conservatively and healed spontaneously within 1 month [Figure 1]. No other significant prenatal, natal, and postnatal history was present. Mother of the baby denied any other complaints.

On examination, the baby had 1.5 cm × 1 cm soft spherical nontender swelling at the lower end of the right sternocleidomastoid muscle attached to it, more obvious on crying and extension of the neck [Figure 2]. Other otorhinolaryngological examination was fairly normal. The patient was sent for ultrasound‑guided fine‑needle aspiration cytology (FNAC). Ultrasound was reported as focal fusiform swelling of the right sternocleidomastoid muscle suggesting pseudotumor or congenital fibromatosis colli as this swelling was inseparable from sternocleidomastoid muscle [Figure 3]. FNAC was dry tap so inconclusive. The patient was sent for physiotherapy. The patient was followed up regularly with repeat ultrasound every 6 months and magnetic resonance imaging (MRI) which eventually reported as normal at 1 year 3 months of age. Also clinically, there was no swelling palpable at this age. The patient is still on follow‑up from our side.

Discussion
Fibromatosis colli also known as immature infantile tumor or pseudotumor of the sternocleidomastoid is a rare condition that presents as a neck swelling 2–4 weeks after birth.[4] The cause of this entity probably due to hematoma formation eventually leads to necrosis and fibrosis in the muscle fibers.[4] Our case presented at the age of 1 month old. This child was born by assisted vaginal delivery with vacuum. This case presented as 1.5 cm × 1 cm soft swelling in the lower third of the sternocleidomastoid muscle, but the patient did not have any restriction of neck movements.

Differential diagnosis may include inflammatory neck lumps such as Here, we present a rare case of unilateral fibromatosis colli of the sternocleidomastoid in an infant with contralateral clavicle fracture after assisted vaginal delivery. We also try to reason that because of right sternocleidomastoid tension, the fracture in the right clavicle was avoided, and because of left‑sided clavicle fracture, left sternocleidomastoid muscle did not form pseudotumor as there was release of tension in these muscle fibers after fracture.

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lymph nodes, solid tumors such as rhabdomyosarcoma, teratoma, and Burkitt lymphoma as well as vascular malformations. However, association of clavicle fracture and also vacuum-assisted delivery makes pseudotumor sternocleidomastoid as the most possible diagnosis of the neck swelling in this case. The exact incidence of unilateral pseudotumor sternocleidomastoid with contralateral clavicle fracture is not known. This is the second case reported to the best of the authors’ knowledge. The probable reason behind this could be release of the tension in left sided sternocleidomastoid muscle by left clavicle fracture which avoided the formation of pseudotumor in left sternocleidomastoid muscle. And also tension and stretch in right sternocleidomastoid muscle spared right clavicle from having fracture.

Ultrasound imaging is the preferred imaging modality for investigating fibromatosis colli. In addition, computed tomography (CT) scan and MRI may give further details on the extent of muscle involvement and relation to surrounding structures. Uniform enlargement or shortening of the sternocleidomastoid muscle is a characteristic appearance on CT scan images. Fortunately, there was no enlargement or shortening of the sternocleidomastoid muscle as per MRI scan of the neck of a patient at the age of 15 months. X-ray is diagnostic of clavicle fracture.

In the early stages, histopathology findings include spindle cells appearing in clusters in a fibromyxoid background and atrophic skeletal myocytes. A great amount of giant cells, fibroblasts, bare nuclei, and collagen are also found. FNAC failed to help in diagnosis as it was dry tap in our case.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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**Conflicts of interest**

There are no conflicts of interest.

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