DOI: 10.7860/IJNMR/2017/25968.2202

Congenital Pseudoarthrosis of Clavicle: A Rare Diagnosis in Neonate

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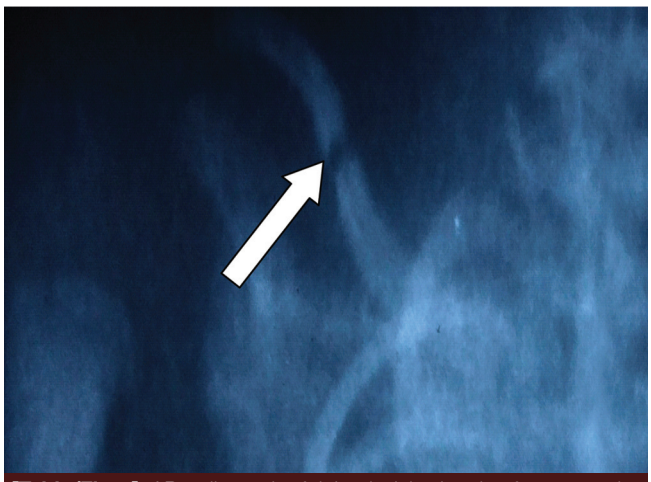
Keywords: Cleidocranial dysostosis, Fracture, Silvermann score

Clavicle is the most common bone to get fractured during delivery process [1]. Birth trauma contributes to most of the cases, with a reported frequency of 15 per 1000 live births [2]. The association of clavicular fracture with brachial plexus injuries is well-known hence, it prompts a thorough neurological evaluation in the presence of clavicular fracture. We described a neonate with congenital pseudoarthrosis of the right clavicle, which is a rare entity in neonatal period.

Twins born through uncomplicated vaginal delivery to primigravida mother at 32 weeks of gestational age requiring no resuscitation at birth was referred for respiratory distress since birth. First born was asymptomatic whereas, second was having severe respiratory distress (Silvermann score 5/10). Chest X-ray done to ascertain the etiology revealed fractured right clavicle at the medial end with both the fractured segments aligned at the same level and their borders being sclerotic [Table/Fig-1]. Clinically, there was no visible or palpable swelling at the site and there was no injury mark in the overlying skin. Follow-up ultrasound as well as X- ray showed no callus formation [Table/Fig-2]. These findings confirmed the diagnosis of Congenital Pseudoarthrosis of the Clavicle (CPC). The condition was managed conservatively and no surgical intervention was done during baby's neonatal intensive care unit stay as she maintained full range of painless limb movement. However, the parents were advised for regular follow-up.



[Table/Fig-1]: AP radiograph of right clavicle showing fracture at the medial end with sclerotic ends (arrow).

[Table/Fig-2]: Ultrasonography of right clavicle showing fracture with lack of callus formation (arrow).

Clavicular fracture with non-union or cleidocranial dysostosis were considered as differential diagnosis.

Congenital pseudoarthrosis of the clavicle is a rare disorder in neonates that is diagnosed incidentally at or after birth and is triggered by failure of the fusion of the ossification centre of the clavicle at around the seventh week of gestation [3,4]. The right clavicle is more often affected [2,4] accounting for around 80% of the cases. Radiologically, it involves the middle part of the clavicle with a definite separation into two parts. Notably, at the site of pseudoarthrosis, both ends show bony hypertrophy with well-defined corticated borders. Lack of callus formation at the site of the pseudoarthrosis and an uneventful delivery helps distinguishing it from the much more common differential diagnosis of clavicular fracture with non-union [2].

High levels of clinical alertness, detailed birth history, physical examination are essential in establishing this diagnosis from a number of other differential diagnoses.

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FINANCIAL OR OTHER COMPETING INTERESTS:
None.

Date of Publishing: **Apr 01, 2017**