

Additional Considerations in Pediatric Clavicle Fracture Non-Union: An Under-Recognized Clinical Entity

Nadeem Akhtar Qureshi¹

Learning Point of the Article:

This report emphasizes the need for heightened awareness of this rare complication and its important differential diagnoses. Further studies are warranted to better define risk factors and establish follow-up protocols tailored to pediatric patients with clavicle fractures.

Dear Editor-in-Chief,

Having read the article by Kumar et al., titled Clavicle Fracture Non-Union in a 3-Year-Old Child: A Case Report and Literature Review published in the Journal of Orthopaedic Case Reports 2026 March;16(03):179–183, with great interest, I would like to commend the authors for reporting an exceptionally rare case of clavicle fracture non-union in a very young child and demonstrating its successful surgical management with a favorable functional outcome [1]. The report adds valuable clinical insight to the limited existing literature on this unusual complication of an otherwise commonly encountered pediatric injury. However, there are a few additional considerations that may further enrich the present discussion.

To the best of my knowledge, the existing literature on clavicle fracture non-union in the pediatric population has predominantly been reported in older children and adolescents [2–7]. While Duplaintier et al. reported post-traumatic clavicle non-union in a 4-years-old child [8], Kumat et al. reported the condition in a 3-year-old child [1], further emphasizing the rarity and potential under-recognition of clavicle fracture non-union in toddlers.

The present case emphasizes that significant displacement and lack of cortical apposition may contribute to failed union even in very young children with substantial remodeling and healing capacity. This observation challenges the prevailing notion that clavicle non-union is virtually nonexistent in toddlers and reinforces the importance of vigilant clinico-radiological follow-up.

In previously reported pediatric clavicle non-union cases, differential diagnoses such as congenital pseudoarthrosis of the clavicle, cleidocranial dysplasia, and neurofibromatosis has often been emphasized, particularly in very young children presenting with longstanding clavicular deformity [2-8]. Apart from histopathological evaluation to exclude congenital pseudoarthrosis of the clavicle, additional discussion by the authors regarding the clinical, radiological, and intraoperative features favoring traumatic non-union would have further strengthened the diagnostic interpretation. Moreover, interpretation of persistent pain and functional limitation resulting from an injury reportedly sustained at approximately one year of age may be challenging, as symptoms in preverbal or early verbal children are often inferred indirectly through parental observations rather than reliable subjective symptom reporting.

Author's Photo Gallery



Dr. Nadeem Akhtar Qureshi

Access this article online

Website:
www.jocr.co.in

DOI:
<https://doi.org/10.13107/jocr.2026.v16.i06.7562>

¹Department of Orthopedics, Futela hospital, Rudrapur (U.S.Nagar), Uttarakhand - 263153, India.

Address of Correspondence:

Dr. Nadeem Akhtar Qureshi,
Department of Orthopedics, Futela hospital, Rudrapur (U.S.Nagar), Uttarakhand - 263153, India.
E-mail: drmaq1308@gmail.com

Submitted: 28/05/2026; Review: 26/05/2026; Accepted: May 2026; Published: June 2026

DOI: <https://doi.org/10.13107/jocr.2026.v16.i06.7562>

© The Author(s). 2026 Open Access. This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits unrestricted use, distribution, and non-commercial reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The Creative Commons Public Domain Dedication waiver (<http://creativecommons.org/publicdomain/zero/1.0/>) applies to the data made available in this article, unless otherwise stated.

Although the manuscript is presented as a “case report and literature review,” the literature synthesis remains relatively concise. Inclusion of a more detailed comparison with previously reported pediatric clavicle non-union cases could have further enriched the discussion regarding age distribution, fracture characteristics, management strategies, and outcomes in this uncommon entity [2-8].

Currently, the lack of clear guidelines regarding routine radiographic surveillance in pediatric clavicle fractures may contribute to delayed recognition of complications such as non-

union, thereby highlighting the importance of early identification and timely intervention to potentially prevent prolonged morbidity.

This report therefore not only adds to the limited literature on pediatric clavicle fracture non-union but also contributes to the evolving understanding of this rare complication while highlighting the need for further studies addressing risk factors, follow-up protocols, and diagnostic considerations in this uncommon entity.

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

Conflict of interest: Nil **Source of support:** None

References

1. Kumar R, Tripathi A, Kumar N, Kumar G. Clavicle Fracture Non-Union in a 3-Year-Old Child: A Case Report and Literature Review. *Journal of Orthopaedic Case Reports* 2026 March;16(03):179-183.
2. Nogi J, Heckman JD, Hakala M, Sweet DE. Nonunion of the clavicle in a child. A case report. *Clin Orthop Relat Res* 1975;110:19-21.
3. Jain N, Peravali B, Muddu B. Clavicle nonunion in children a report of two cases and a review of the literature. *Shoulder Elbow* 2009;1:40-42.
4. Caterini R, Farsetti P, Barletta V. Posttraumatic nonunion of the clavicle in a 7-year-old girl. *Arch Orthop Trauma Surg* 1998;117:475-76.
5. Spapens N, Degreef I, Debeer P. Posttraumatic pseudarthrosis of the clavicle in an 8-year-old girl. *J Pediatr Orthop B* 2010;19:188-90.
6. Pourtaheri N, Strongwater AM. Clavicle nonunion in a 10-year-old boy. *Orthopedics* 2012;35:e442-43.
7. Smith NW, Williams N. Post-traumatic nonunion of a clavicle fracture in a 9-year-old child. *J Pediatr Orthop B* 2016;25:74-77.
8. Duplantier NL, Waldron S. Post-traumatic nonunion of the clavicle in a 4-year-old boy and the importance of vitamin D level testing. *J Pediatr Orthop B* 2016;25:78-80.

Conflict of Interest: Nil

Source of Support: Nil

Consent: The authors confirm that informed consent was obtained from the patient for publication of this article

How to Cite this Article

Qureshi NA. Additional Considerations in Pediatric Clavicle Fracture Non-Union: An Under-Recognized Clinical Entity. *Journal of Orthopaedic Case Reports* 2026 June;16(06):599-600.

