

CASE REPORT

Congenital Medial Clavicular Pseudoarthrosis - A Rare Presentation in an Adult

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Abstract

We are presenting a rare case of a 29-year-old male patient with congenital pseudoarthrosis of the clavicle who presented in adulthood with a progressively growing lump on medial end of clavicle which after investigations turned out to be pseudoarthrosis of the medial clavicle.

Keywords

Pseudoarthrosis, Clavicle, Congenital, Radiograph, 3D-CT.

Introduction

Congenital pseudoarthrosis of the clavicle is a rare medical condition, first described by Fitzwilliams in 1910 and included in a case series of cleidocranial dysostosis^[1], with approximately 200 cases recorded worldwide till date. It is usually noticeable in early childhood. It can be diagnosed at birth and represents non-union of the various medial clavicular ossification centres. Predominantly it's common in females and afflicting the right clavicle often. If missed in early childhood, it results in deformity in early to late adulthood. The diagnosis can be made by clinical and radiological examinations^[2]. The majority cases affect the right clavicle with female gender predisposition, the cases with left clavicle involvement are associated with other congenital disorder like dextrocardia. It's typically identified in the early days of life, presenting as a painless protuberance at the middle third of the clavicle that becomes more apparent as the child grows^[3].

Case Report

A 29-year-old male with no previous trauma history visited the outpatient department due to a progressively enlarging swelling located on the inner side of the clavicle, initially noticed about 1.5 years ago which became painful over the past two months. Upon examination, a firm bony lump was observed at the medial extremity of the clavicle (*Fig A*) and mild tenderness was noted at the right sternoclavicular joint with painful full range shoulder movement. However, the vascular and neurological examination of the right upper extremity yielded normal results. An oblique clavicle radiograph depicted a bone defect along with the overlapping of the medial and lateral parts of the clavicle with osteoarthritic changes (*Fig, B*). The three-dimensional reconstructed CT images revealed a discontinuity in the bone structure, with the overlap of

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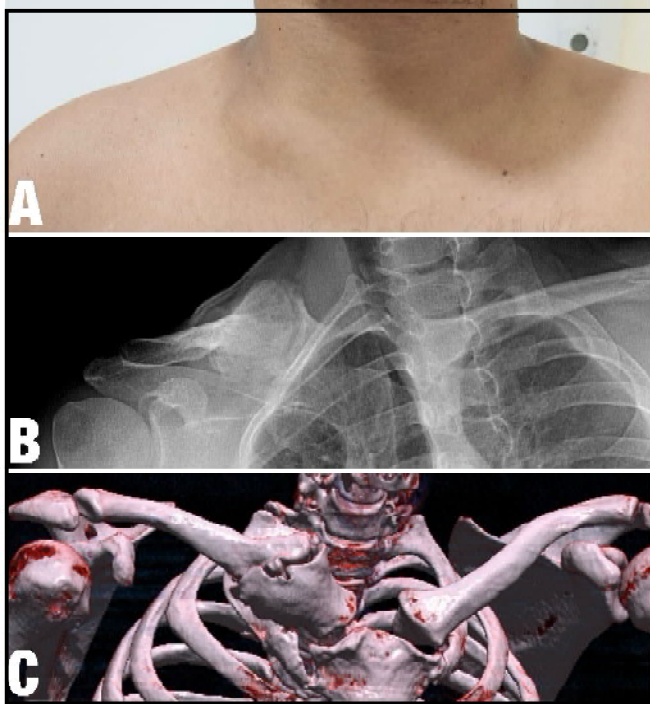


Fig : (A) Clinical image of a 29-year-old male patient showing a swelling located on the inner side of the clavicle. (B) An oblique radiograph of the right clavicle of the same patient with progressively enlarging swelling over medial clavicle showing bone gap between the lateral and medial parts of the clavicle with overlapping and formation of a pseudo joint and osteoarthritic changes. (C) The three-dimensional computed tomography VRT image of the same patient showing the bone gap, degenerative changes in the pseudo joint formed between lateral 2/3rds and medial 1/3rd of the right clavicle with normal right sternoclavicular joint.

the clavicle's lateral and medial ends with secondary cystic changes at the articulating ends, resulting in a contour bulge (Fig, C). The clinical and radiological evidence suggested diagnosis of congenital right medial clavicular pseudoarthrosis. The patient was presented with options of resection and grafting, but he refused for the surgical treatment.

Discussion

Congenital medial clavicular pseudoarthrosis is believed to result from the failure of the clavicle's two ossification centres to fuse during the seventh week of gestation^[4]. Diagnosis primarily relies on clinical and radiological

assessments, as the radiographic characteristics are distinctive and distinguish this condition from clavicular fractures^[2]. Surgical intervention becomes necessary when addressing aesthetic concerns or managing functional issues such as progressive pain or thoracic outlet syndrome. Surgery is indicated to address aesthetic concerns or to manage functional issues like progressive pain and thoracic outlet syndrome^[5,6].

Conclusion

Radiological evaluation including radiography and three-dimensional computed tomography with volume rendered reconstruction form an important part of the diagnosis of pseudoarthrosis of the clavicle which can mimic fracture and neoplastic pathologies.

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Conflicts of Interest

There are no conflicts of interest.

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