

An isolated traumatic acromion fracture, an uncommon injury

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ABSTRACT

Introduction: Isolated acromion fractures are rare. Even though treatment is relatively straight forward and not always operative, clinicians should be sure to be aware of them when evaluating upper extremity trauma as missed diagnosis could lead to painful and disabling symptomatic malunion. **Case Report:** A 49-year-old male presented to the emergency department (ED) complaining of left shoulder pain after falling off of his bicycle and landing on his left shoulder two days prior to presentation. He reported limitation of his range of motion and pain worsened by movement. X-rays revealed an acute minimally displaced fracture of the left acromion. **Conclusion:** Do not miss acromion fractures. Many clinicians who evaluate and treat patients in acute encounters do not have the luxury of real time radiologist assistance when interpreting their imaging. Subtle and/or rare fractures are more likely to be missed in the initial encounter and missed fractures have obvious clinical and medicolegal implications for all involved.

Keywords: Isolated acromion fracture, Rare injury, X-ray

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INTRODUCTION

Isolated acromion fractures are rare. Even though treatment is relatively straight forward and not always operative, clinicians should be sure to be aware of them when evaluating upper extremity trauma as missed diagnosis could lead to painful and disabling symptomatic malunion.

CASE REPORT

A 49-year-old male presented to the emergency department (ED) complaining of left shoulder pain after falling off of his bicycle and landing on his left shoulder two days prior to presentation. He reported limitation of his range of motion and pain worsened by movement. He took ibuprofen with no relief and when the pain persisted a third day, he came to the ED. X-rays revealed an acute minimally displaced fracture of the left acromion (Figures 1 and 2). He was discharged home with a sling for comfort and followed up in the orthopedic surgery clinic on an outpatient basis. Two weeks later repeat X-rays showed evidence of healing and the patient reported improvement of pain and range of motion so nonoperative treatment was continued.

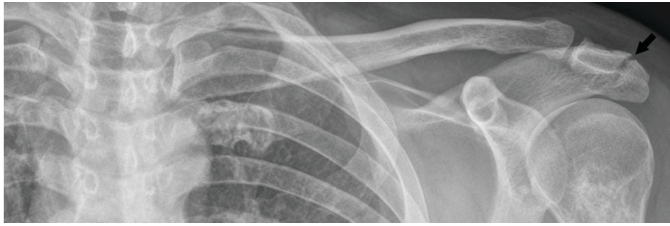


Figure 1: AP X-ray of acute minimally displaced fracture of the left acromion.

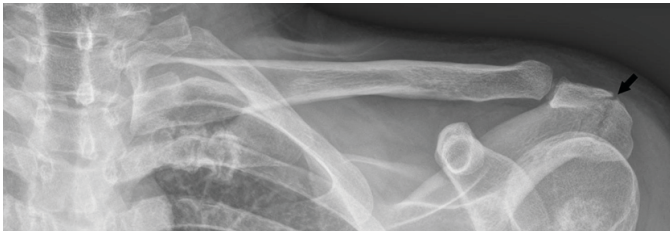


Figure 2: Axial X-ray of acute minimally displaced fracture of the left acromion.

DISCUSSION

Acromion fractures are rare, and instances in which the fracture is the lone, isolated injury are rarer still. They are most often the result of multi-trauma and in such instances may be missed as the focus of clinicians is on more clinically significant life and limb threatening injuries [1]. Conversely, in rare instances, such as this one, they could be missed due to clinicians being unfamiliar with the injury and seeing no other obvious defects involving the joint spacing of the shoulder. If a displaced acromion fracture is overlooked, symptomatic malunion is a possibility, so clinicians should be sure to fully evaluate the acromion when reading shoulder, scapula, humerus, and clavicle films. Treatment of acromion fractures does not always require surgical intervention, but all should be referred to an orthopedic surgeon [2].

Do not miss acromion fractures. Many clinicians who evaluate and treat patients in acute encounters do not have the luxury of real time radiologist assistance when interpreting their imaging. Subtle and/or rare fractures are more likely to be missed in the initial encounter and missed fractures have obvious clinical and medicolegal implications for all involved. Timely diagnosis to facilitate early treatment and rehabilitation will benefit the outcome of any patient who has sustained a traumatic injury substantial enough to result in a fracture. When evaluating X-rays it is best practice to completely examine the details of all structures captured and not hastily focus solely on locations where one may presume an injury to be [3].

CONCLUSION

Isolated acromion fractures are rare and may be missed when clinicians interpret X-rays without

the assistance of a real time radiologist. Missed fractures, especially if displaced, can lead to poor patient outcomes. When clinicians correctly identify such fractures during the initial encounter they can ensure that proper, timely treatment and follow-up are implemented and arranged.

REFERENCES

1. Çiçekli Ö, Akar A, Topçu HN. Displaced acromion fracture: A rare injury, case report. *Int J Surg case Rep* 2017;39:313–6.
2. Hess F, Zettl R, Welter J, Smolen D, Knoth C. The traumatic acromion fracture: Review of the literature, clinical examples and proposal of a treatment algorithm. *Arch Orthop Trauma Surg* 2019;139(5):651–8.
3. Pinto A, Berritto D, Russo A, et al. Traumatic fractures in adults: Missed diagnosis on plain radiographs in the Emergency Department. *Acta Biomed* 2018;89(1–S):111–23.

Author Contributions

Kelly M Blosser – Conception of the work, Design of the work, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Lauren M Schroeder – Conception of the work, Design of the work, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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Conflict of Interest

Authors declare no conflict of interest.

Data Availability

All relevant data are within the paper and its Supporting Information files.

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