

BACKGROUND

- Pediatric elbow fractures represent 10% of all pediatric fractures
- Lateral epicondylar fractures are not well studied, with just a few case-reports in literature.
- There is no consensus on management strategies and no long-term data to assess outcomes in pediatric lateral epicondylar fracture

PURPOSE

- To describe the largest case series of pediatric lateral epicondylar fractures and quantify means of injury, concomitant injuries, management strategies, and patient outcomes.

METHODS

- Retrospective case series
- Patients under the age of 18 years diagnosed with lateral epicondyle fractures
- Patient reported outcome measures (PROMs) were assessed using the QuickDASH score and associated functional variables.



Fig 1: Lateral Epicondylar Elbow Fracture

RESULTS

- N =22, average age of 10.5 years.
- Mechanism: 36.4% were sports-related, while other were due to high-energy falls such as falls off bicycles, stairs, or hover boards.
- 16 (72.7%) were nondisplaced fractures.
 - Associated Injuries: 6 (27.3%) elbow dislocations, 4 (18.2%) isolated coronoid process fractures, and 2 (9.1%) isolated ligamentous injuries. 3 (13.6%) concomitant elbow fractures, most commonly the medial epicondyle.
- Primary treatment was rigid immobilization in long arm cast or splint for 4 weeks.
 - 8 (36.4%) required physical therapy
 - 3 (13.6%) patients required operative intervention
- 17 (77.2%) patients with mean 3.1 years of follow-up, had Quick DASH scores of 6.4 compared to 10.9 average in general US population.

CONCLUSION

- Lateral epicondylar fractures are rare
 - Axial load and valgus directed force on a supinated forearm.
- Most fractures are nondisplaced, for which conservative management in a long arm cast is recommended.
- Care should be taken to evaluate for associated fractures and ligamentous injuries with displaced high-energy injuries
- PROMs indicate that with appropriate treatment, this injury does not significantly affect long-term function.

REFERENCES

- Ando A, Hagiwara Y, Koide M, Yamashiro M, Matsuda M, Itoi E. Lateral dislocation of the elbow with concomitant lateral epicondyle fracture: A case report and review of the literature. J Orthop Sci. 2019 May;24(3):563-567.