

## Medial Epicondyle Humeral Fracture During Arm Wrestling: A Case Report

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### INTRODUCTION:

Arm wrestling, a sports of strength was made popularized first in 1952 by a journalist in California.<sup>[1]</sup> While medial humeral epicondylar fracture consists of 11-20% of all pediatric fractures, it's an unusual arm wrestling complication.<sup>[1]</sup>

### REPORT:

A 15-year-old right-handed boy visited emergency department complaining of pain and swelling at right elbow that occurred during recreational arm wrestling. Examination revealed tender swelling at medial aspect of right elbow with limited range of motion. No neurological deficit was noted.

Plain radiography of right elbow revealed right humeral medial epicondyle fracture as shown in Figure 1.



**Figure 1:** lateral, AP view right elbow Kirschner wire fixation was done with above elbow cast applied as in Figure 2.



**Figure 2:** lateral, AP view right elbow post fixation

He is given appointments to monitor bone union and eventual Kirschner wire removal.

Structurally weaker medial epicondyle are prone to injury along cartilagenous physal plate.<sup>[1][3]</sup> During arm wrestling with elbow flexed, sudden violent change of concentric to eccentric contraction of forearm flexor-pronator muscles by opponent's tractional force causes humeral medial epicondyle avulsion fracture.<sup>[1][2]</sup>

Around 90% of non-operation resulted in non-union; carrying risk of complications such as valgus elbow instability, ulnar entrapment neuropathy and reduced range of movement of elbow.<sup>[2][3]</sup> Operative fixation allows higher union rate to prevent such complications.<sup>[2]</sup>

### CONCLUSION:

Operative treatment of avulsed humeral epicondyle provides stable fixation to counteract flexor-pronator muscles traction to allow bone union and restore elbow stability.

### REFERENCES:

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