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Retrospective Cohort Study On Early Mobilization And Functional Outcomes After Lucl Repair With Internal Bracing In Elbow Dislocations And Fracture-Dislocations

Nikolaos Platon Sachinis MD, PhD, Thessaloniki, GREECE, Presenter
Aleksandros Konstantinopoulos MD, Thessaloniki, GREECE
Nikiforos Galanis MD, PhD, Thessaloniki, GREECE
Panagiotis Givissis PhD, Thessaloniki, GREECE

Work affiliated to:

"Georgios Papanikolaou" Hospital, Thessaloniki, GREECE

Faculty Disclosure Information

- Nothing to disclosure

Introduction

- Elbow dislocations, particularly when accompanied by fractures, often require surgical intervention to prevent instability and stiffness.
- The optimal approach remains debated, especially in complex injuries.
- This study evaluates outcomes following lateral ulnar collateral ligament (LUCL) repair with internal bracing, including cases with fracture-dislocations

Materials-Methods

- 31 patients with elbow instability (14 with posterolateral dislocations, 10 with radial head fractures, and 7 with terrible triad injuries) underwent LUCL repair with internal bracing

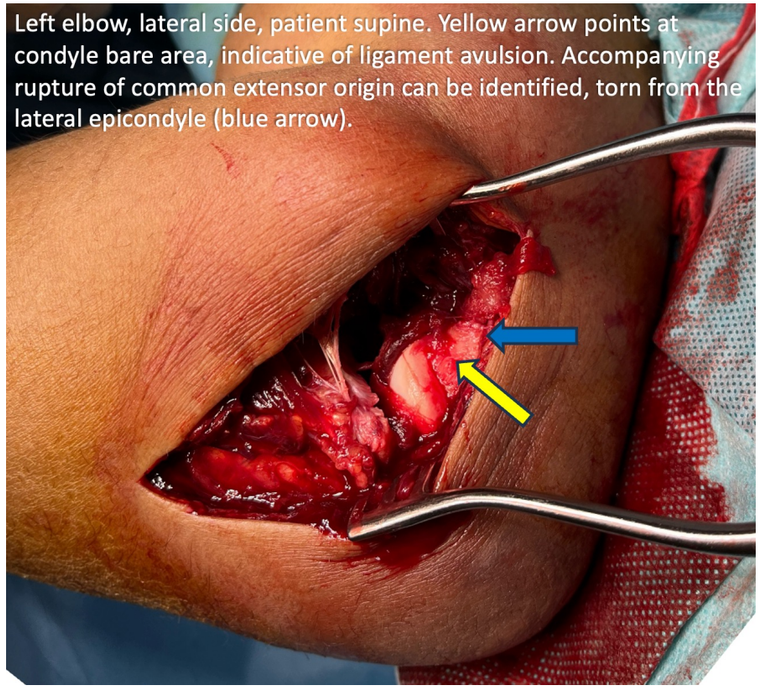
- Preoperative Quick-DASH and Mayo Elbow Performance Scores (MEPS) were recorded

- Postoperative follow-up was conducted at 6, 12, 24, and 52 weeks

  ✓ Early mobilization after a maximum 7-day bracing period

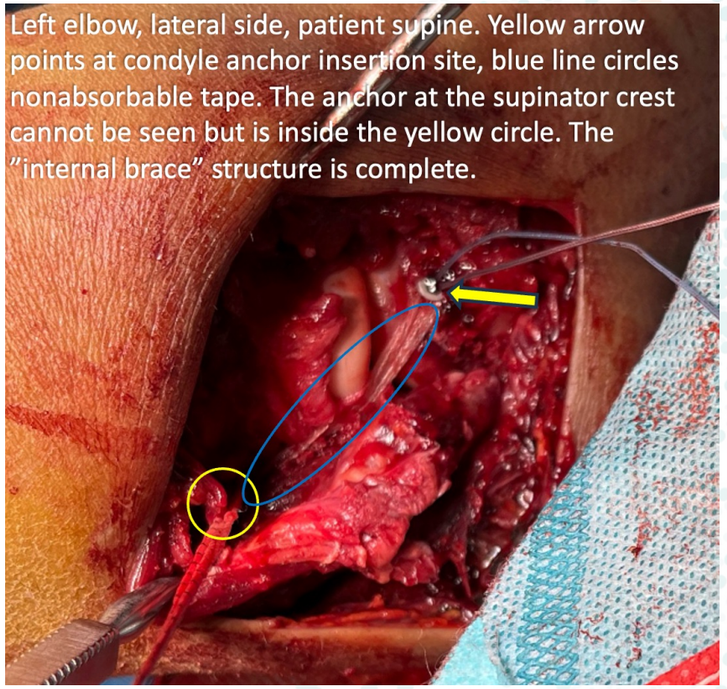
Materials-Methods

1



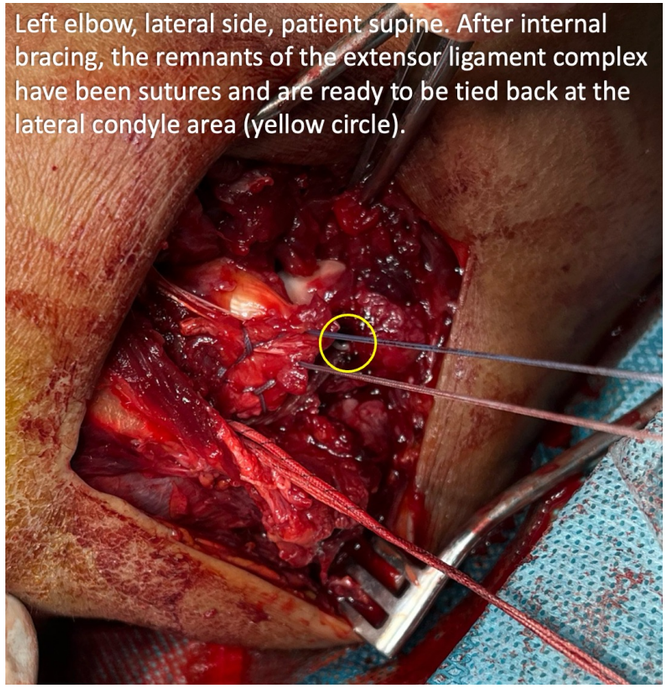
Left elbow, lateral side, patient supine. Yellow arrow points at condyle bare area, indicative of ligament avulsion. Accompanying rupture of common extensor origin can be identified, torn from the lateral epicondyle (blue arrow).

2



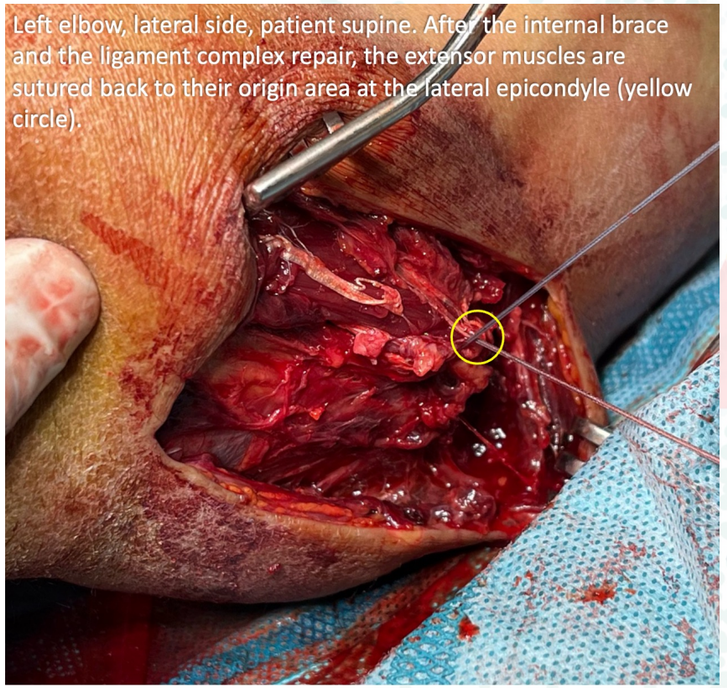
Left elbow, lateral side, patient supine. Yellow arrow points at condyle anchor insertion site, blue line circles nonabsorbable tape. The anchor at the supinator crest cannot be seen but is inside the yellow circle. The "internal brace" structure is complete.

3



Left elbow, lateral side, patient supine. After internal bracing, the remnants of the extensor ligament complex have been sutures and are ready to be tied back at the lateral condyle area (yellow circle).

4



Left elbow, lateral side, patient supine. After the internal brace and the ligament complex repair, the extensor muscles are sutured back to their origin area at the lateral epicondyle (yellow circle).

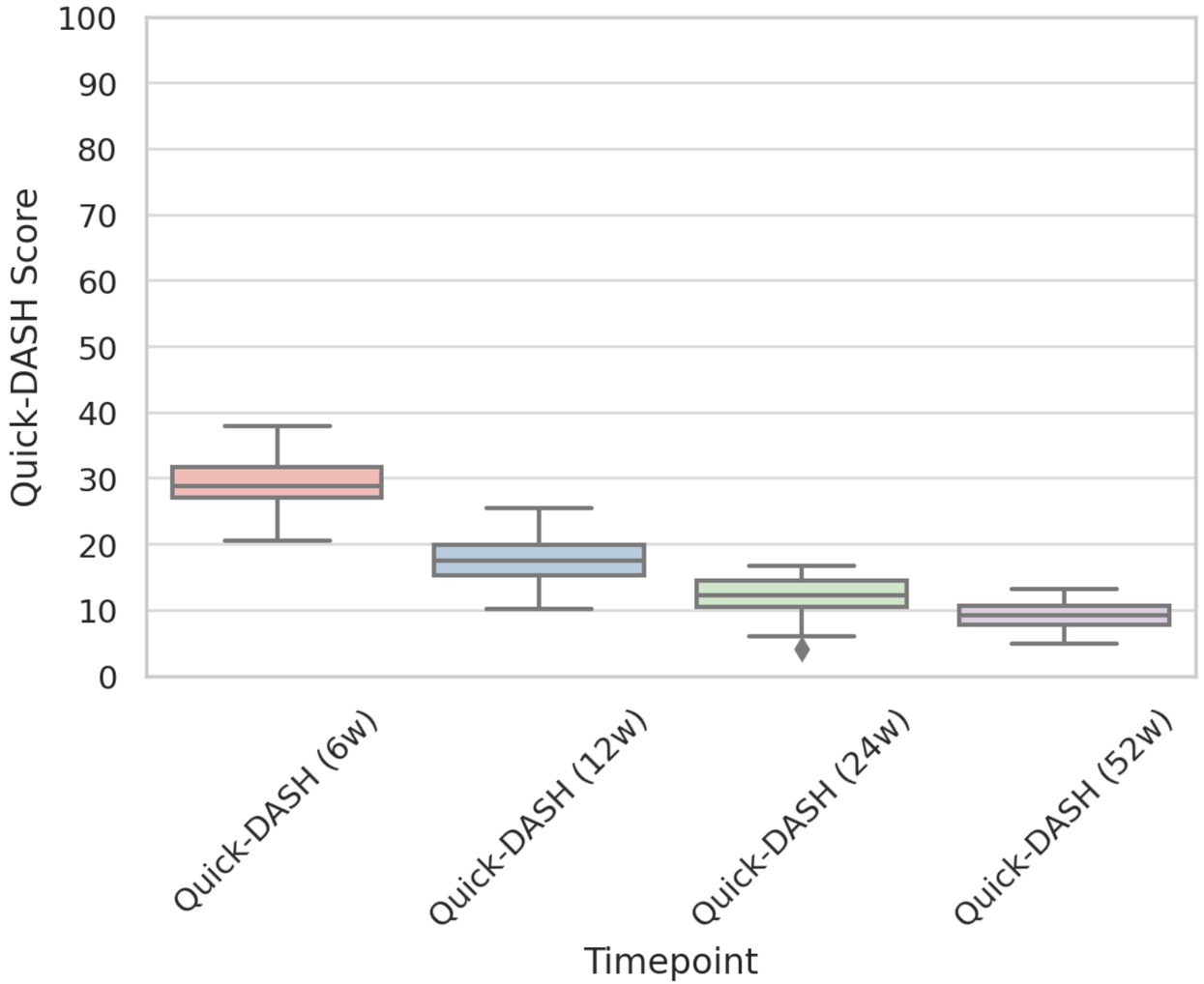
Results

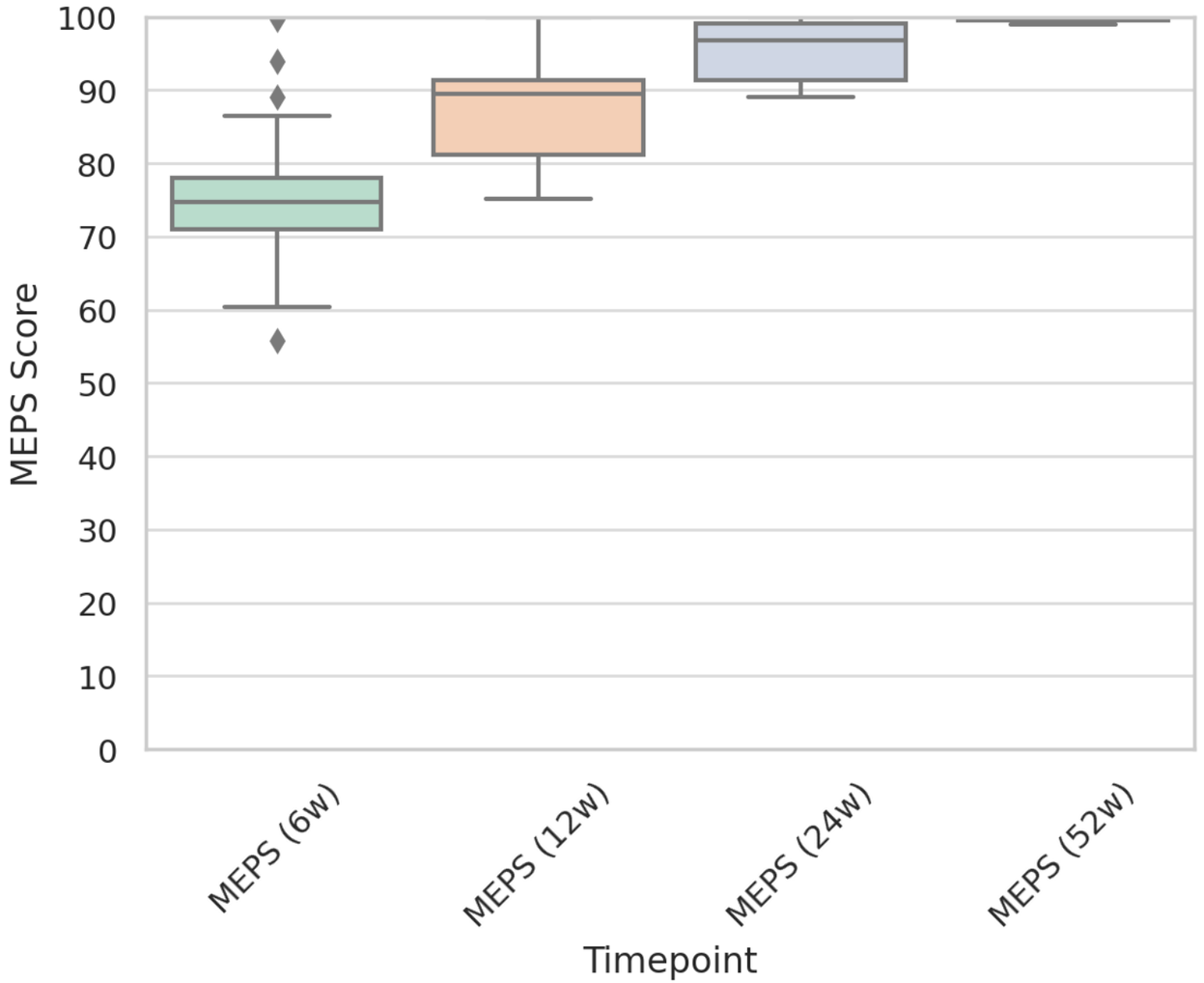
At one year

Median Quick-DASH score was 9, MEPS was 100, with a median range of motion (ROM) of 10° extension and 130° flexion

Heterotopic ossification occurred in 20 of 31 patients, but only one patient (the case with postoperative stiffness) required re-operation

All patients returned to pre-injury activity levels





Results

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Conclusion

- LUCL repair with internal bracing is a safe and effective method for restoring elbow stability, facilitating early mobilization, and minimizing long-term complications, particularly in complex fracture-dislocations

➢ Heterotopic ossification was common but rarely required re-operation

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