The extended medial elbow approach-a cadaveric study

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BACKGROUND

The two most commonly used approaches to expose medial elbow structures are the flexor carpi ulnaris split and the Hotchkiss over-the-top approach. The aim of this study was to define the extended medial approach to the elbow, featuring advantages of over-the-top (proximal exposure) and additional complete exposure of the coronoid and proximal medial ulna, while respecting the internervous plane between the flexor pronator mass and flexor carpi ulnaris muscle.

METHODS

In this comparative anatomic study, 12 fresh frozen cadaveric elbows were dissected alternately to study the distal limitation and exposed area of the extended medial elbow approach compared with splitting the flexor carpi ulnaris.

RESULTS

Proximal ulna exposure area was comparable between the extended medial elbow approach (average, 840 mm(2)) and the flexor carpi ulnaris split (average, 810 mm(2); \( P = .44 \)). The extended medial approach was limited distally by the posterior recurrent ulnar artery (mean 68 mm from medial epicondyle), whereas the first motor branch for the flexor carpi ulnaris muscle limited the second approach in 75% of the specimens (mean 29 mm from medial epicondyle, \( P < .001 \)).

CONCLUSIONS

The extended medial elbow approach is a single approach allowing full exposure of the medial elbow and combining the advantages of the over-the-top approach with a safe distal extension to the medial ulna. In contrast to the flexor carpi ulnaris split, our approach respects the internervous plane.

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