

## OUTCOME OF TOTAL ELBOW ARTHROPLASTY (TEA) AS BAIL OUT PROCEDURE IN COMPLEX ELBOW TRAUMA

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**Introduction:** The elbow is a complex joint in which the stability is imparted by osseous and soft tissue constraints. A history of traumatic joint comminution, osteoporosis and underlying co-morbidities makes fixation of such fractures difficult. In our practice, we came across four different patients; two in which a previous osteosynthesis was done in the past following a complex elbow fracture, presenting again with unsatisfactory functional outcomes and pain. Two other patients had a fresh complex elbow fracture. The disability of arm, shoulder and hand (DASH) score, was used to evaluate the functional outcome of the upper limb in these patients post total elbow arthroplasty (TEA).

**Discussion:** The mean post operative period of our patients was 12 months (5-24 months). The mean age of our patient group was 68 years old(range). Results showed that the two cases in which a TEA was done following an unsatisfactory osteosynthesis reported very good improvement in DASH score. The first case showed improvement from a DASH score from 48.3 to 11.7 while the other showed an increase of 96% from a DASH score of 91.3 to 3.4. As for the two fresh trauma cases in which a TEA was done, one patient reported a DASH score of 15.8, 8 months post surgery. However, our latest case showed only a score of 83 as the patient complaints of some post surgery pain limiting her activities due to iatrogenic ulnar nerve neuropraxia. All 4 cases had full ROM of elbow from 0 degree to at least 130 degrees flexion. No infection or early failure was reported.

**Conclusion:** Treating complex elbow fractures can be a challenge. TEA remains an alternative to osteosynthesis in these cases. Our small number of cases showed that it has an important role in restoring a painless, functional and stable elbow.