

the ulna and the humerus in 1 case each. There were 25 pin-site infections, of which 10 required resetting of fixator pins and 15 resolved by intensive pin site care and antibiotic treatment. There were no complications to the radial nerve and 8 postoperative surgery related ulnar neuropathies (PSRUN) in the severe posttraumatic elbow stiffness group, requiring in situ neurolysis of the ulnar nerve. The overall functional result was excellent.

Conclusions: Hinged elbow fixations is a safe, reliable and versatile surgical tool in complex elbow trauma and posttraumatic elbow reconstruction with a very low fixator-related complication rate in specialized elbow centers with elaborated teaching programs and a functioning aftercare unit but may belong in these centers.

ARTHROSCOPIC TREATMENT OF ANTEROMEDIAL CORONOID FRACTURE: COMPLETE FUNCTIONAL RECOVERY AT ONE YEAR FOLLOW UP



Michele Cavaciocchi ^a, Alessandra Colozza ^a, Sara Padovani ^b. ^a AUSL della Romagna, Orthopaedic Department of Faenza Hospital, Faenza (ra), Italy. ^b University of Ferrara, Ferrara, Italy

Aim: To prove that elbow arthroscopy is a safe, reproducible, low-invasive and effective technique to treat complex coronoid fractures

Background: The coronoid process of the ulna is a fundamental stabilizer of the elbow joint. In Complex Elbow Instabilities (CEI), coronoid fractures are associated with ligaments lesions. In the last 10 years, elbow arthroscopy has been suggested as a feasible and less invasive technique for the coronoid reduction and internal fixation. The purpose of this study was to assess the functional recovery one year after the arthroscopic treatment of coronoid fractures.

Methods: Consecutive patients who underwent arthroscopic reduction and internal fixation (ARIF) of the coronoid process between 2014 and 2017 at the Orthopaedic Department of Faenza Hospital were enclosed. The inclusion criteria were anteromedial coronoid fractures (O'Driscoll type II lesions), absence of type III-IV Mason radial head fracture and 1-year minimum follow-up. We retrospectively reviewed the patients' charts and retrieve the following data, at one year of follow up for each patient: elbow range of motion and stability (MEPS), pain (Numerical Rating Scale, NRS: 0-10), radiological consolidation and complications.

Results: Between January 2014 and December 2017, 22 patients were arthroscopically treated for coronoid fracture (7 F and 15 M, mean age 46±14y, 13 dominant sides involved): 4 cases were treated with a pull-out technique, fixed by an endobutton system, the other 18 cases underwent an ARIF with cannulated screws. Lateral collateral ligament was torn in 17 cases: we performed 16 open repairs with suture anchors and one full-arthroscopic repair with Van Riet technique. The Medial Collateral Ligament was repaired just in one case, with an open technique with suture anchor. According to MEPS, at the 1-year follow up, 20 patients reported the highest score with no residual disability, with complete range of motion and with a median pain score of 2; the radiological evaluation at final follow-up showed a successful healing in these 20 patients. The other two cases had a new upper limb trauma after the primary surgery, suffering a re-rupture inside the elbow joint, that required a new surgical treatment. No vascular or infective complications were detected at the final FU in all the cases. One case of the 20 ones that reached the primary healing, suffered elbow stiffness and ulnar nerve paresthesias after the surgery, requiring ulnar nerve open neurolysis and elbow manual release, with complete recovery.

Conclusions: This study shows a large sample of anteromedial coronoid fractures healed after an arthroscopic treatment. Our results support the elbow arthroscopy as a safe, low-invasive surgery for coronoid process fracture, even if technically demanding.

CLINICAL AND RADIOGRAPHIC OUTCOMES OF SALVAGE RADIAL HEAD ARTHROPLASTY



J. Singh, Z. Hammoudi, Adam C. Watts. Wrightington Hospital, Wigan, United Kingdom

Aim: The aim of this study is to examine the medium-term outcomes of salvage radial head arthroplasty (RHA).

Background: There is limited evidence on the outcome of radial head arthroplasty as salvage.

Methods: A retrospective review was conducted of fourteen consecutive patients (9F/5M) with an average age of 48 years having revision RHA from 2011 to 2018. The mean follow-up was 27 months (6-84).

The outcome measures were implant removal, range of movement (ROM), Mayo Elbow Performance Score (MEPS) and radiographic loosening.

Results: Twelve patients had revision of a primary radial head replacement. Two patients had radial head arthroplasty as salvage for excisional arthroplasty complicated by stump impingement or valgus instability. Painful loosening of a radial head component was the most common indication for revision (6 patients). Four patient had chronic longitudinal instability and all had interosseous membrane reconstruction in addition to RHA. Eight patients had revision surgery using a cemented long stem bipolar implant, four with a short stem uncemented implant and 2 with a long stem uncemented implant.

Only 1 of 14 patients had a revision failure and underwent further revision surgery from a short cemented to a long cemented implant that resulted in an excellent outcome (MEPS score 100). On average patients had a good functional outcome with an average MEPS of 77 (40-100) and average ROM from 24 to 121 degrees of flexion.

Radiographic assessment showed evidence of loosening in 3 patients with short stem uncemented implants. One patient required revision and 2 have non-progressive asymptomatic loosening. Three patients had capitellum erosion. Seven patients have ulnohumeral osteoarthritis and one is currently awaiting total elbow replacement.

Conclusions: The overall midterm outcomes with revision radial head surgery are satisfactory. Cemented implants may produce a more favourable outcome in revision surgery.

MID- TO LONG-TERM RESULTS OF RADIOCAPITELLAR ARTHROPLASTY OF THE ELBOW: A PROSPECTIVE STUDY



Giuseppe Giannicola ^a, Piergiorgio Calella ^b, Prospero Bigazzi ^c, Alberto Mantovani ^d, Paolo Spinello ^e, Gianluca Cinotti ^e. ^a Sapienza University of Rome - Policlinico Umberto I, Rome, Italy. ^b Paolo Colombo civil hospital, Velletri, Italy. ^c Hand Surgery and Reconstructive Microsurgery Unit, Azienda Ospedaliero-Universitaria Careggi, Florence, Italy. ^d Domus Salutis private hospital, Legnago, Italy. ^e Sapienza University of Rome, Rome, Italy

Aim: The aim of the study was to analyze the results of two radiocapitellar prostheses in a large case series followed prospectively in the medium to long term and to discuss the indications and results of each prosthesis.

Background: In the last two decades, radiocapitellar arthroplasty (RCA) has been introduced to treat post-traumatic and degenerative conditions of the elbow. Two implants were used: the resurfacing replacement for the lateral compartment of the joint, called the "Lateral Resurfacing Elbow (LRE)", and the "Uni-Elbow Radio Capitellum Implant" (UNI-E). There are few case series on RCA, and the majority of those that do exist are based on small groups of patients and a short- to medium-term follow-up.

Methods: Thirty-one patients with a mean age of 54 years were analyzed. There were 9 primary and 17 cases of post-traumatic osteoarthritis, 3 of capitellum necrosis and 2 of acute fractures. Seventeen Lateral Resurfacing Elbow (LRE) and 14 Uni-Elbow Radio-Capitellum Implant (UNI-E) arthroplasties were performed. Pre- and postoperative evaluations were based on the Mayo Elbow Performance Score (MEPS), the Quick Disabilities of the Arm, Shoulder and Hand score (Quick-DASH) and the modified American Shoulder Elbow Surgeons score (m-ASES).

Results: The mean follow-up was 6.8 years (3.8 to 11.5). Overall, the MEPS, m-ASES and Quick DASH scores improved significantly by 50, 55 and 54 points, respectively. No differences emerged between the two implants, with the exception of worse preoperative pronation-supination values in the UNI-E group; at the last follow-up, pronation was better in the LRE group.

Conclusions: Radiocapitellar arthroplasty yielded a significant and long-lasting improvement in elbow function with a 100% implant survival. The LRE appears to be more suitable for primary osteoarthritis while the UNI-E appears to be more suitable for post-traumatic conditions associated with radial head deformities or capitellum necrosis.

FEASIBILITY OF FAST-TRACK TOTAL ELBOW ARTHROPLASTY



Ante Prljak, Jetske Viveen, Bertram The, Koen Koenraadt, Denise Eygendaal. Amphibia Hospital, Breda, The Netherlands

Aim: We reviewed the necessity of a cast and the effect of the implementation of functional discharge criteria at our institution.

Background: To consider feasibility of a fast-track total elbow arthroplasty programme, first an inquiry has to be performed to determine factors