Results of Arthroscopic Loose Body Excision and Abrasion for Osteochondritis Dissecan of the Elbow in Fragment Detached Phase.

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Backgrounds: Osteochondritis Dissecans (OCD) of the Elbow

- Incidence: elbow 6% / whole OCD
- Generation: Teens
- Genetic: 4.1 / 1000 male
- Onset: Insidious
- Sport: Baseball, Gymnastic, Overhead athletes
- Lateral elbow pain: 79.9-80%
- Limitation of Range of Motion: 90%
- 5-20 degrees loss in extension
- Crepitus with motion
- Locking, Catching in advanced stage
- Locations: Capitellum of humerus

Introductions
When treating osteochondritis dissecans (OCD) of the capitellum, it is important how to manage to perform treatment with the pathological stage/condition. The objective of this study was to examine the postoperative results of removal of intra-articular loose body and abrasion of capitellum in patients with a relatively small affected area during the OCD fragment detached phase.

Materials and Methods
From 2007 to 2016, we conducted a retrospective study which included 29 patients (5 female, 18 males) who suffered OCD with loose body. Mean age at the time of the procedure was 15 years (range, 12-15 years). Mean postoperative follow up period was 14 months (range, 3-24 months). All patients presented disability of upper arm extremities because of pain on motion, stretching and limitation of range of motion.

The position where the loose bodies were present was preoperatively evaluated using three-dimensional computed tomography (3DCT). The bodies were classified into three locations (posterior to the olecranon fossa, lateral to the radial head region, or anterior to the capitellum region), a portal was selectively established with respect to 27 deg. Motion gain. MEPS; 98, Q 15, male, LB and OCD of elbow

Case presentation
15, male, LB and OCD of elbow-right, baseball player
- Preoperative status
  ROM -15-115 (left side: 10-135), MEPS 15+10+10+25=60 Quick DASH score 20.5 ± 100 (baseball)
  Postoperative status (p.o. 1year 2months)
  ROM 135, MEPS 100, Quick DASH score: 4.5 ± 10

Discussions
- Occurrence of OCD
  • knee, 62%; ankle, 25%; elbow, 12%; shoulder; 0.6%; foot; 0.3%
- Diagnosis of unstable OCD fragment → loose body, locking, OA, etc.
- Xp (displaced type and epiphyseal closure), CT (displaced) and MRI (irregular contour, articular defect, T2 high interface) combination
- Preoperative MRI cannot precisely diagnose fragment instability
- Arthroscopic treatment of unstable OCD and LB
  • Small defect
  • This study: Diameter app. 10 mm → 27 deg. Motion gain. MEPS; 98, O-DASH; 0.4. Egi T, et al. FESSH. 2018.
- Large defect

Conclusions
This procedure provided pain relief, free from scratching, improvement of approximately 27 degrees range of motion and both objective and subjective excellent outcomes. These findings indicate that by targeting only patients with lesions up to 10 mm in diameter, and by selectively approaching the location where the loose bodies are present, it is possible to efficiently perform minimally invasive operative treatment. When the lesion is large, because this method does not maintain reconstruction of the joint surface well, osteochondral graft transplantation should be indicated.

Our indication of arthroscopic procedure for OCD
- Closed physes at the radial head
- Smaller lesions up to 10 mm in diameter
- Selectively approach for loose body