

“Osteochondral defects of the elbow”

MPJ van den Bekerom

“Schoudernetwerk congress”
Den Bosch, December 2015

Elbow pain in (baseball) athletes

20% aged 8–12 years

45% aged 13–14 years

58% high school and college athletes

3.4% have OCD in 2000 baseball players



OCD is not Panner disease

Epiphyseal growth disturbance

Osteochondrosis of the Capitellum

Impaired blood flow / (repetitive) trauma

A PECULIAR AFFECTION OF THE CAPITULUM
HUMERI, RESEMBLING CALVÉ-PERTHES'
DISEASE OF THE HIP

by

H. J. Panner

(Tables XI—XIV)

J Child Orthop (2015) 9:9–17
DOI 10.1007/s11832-015-0635-2

ORIGINAL CLINICAL ARTICLE

Panner's disease: literature review and treatment recommendations

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Denise Eygendaal · Michel P. J. van den Bekerom

OCD is not Panner disease

7-9 years

Radiograph: capitellar sclerosis

Treatment: conservative

Benign, self limiting



Demographics

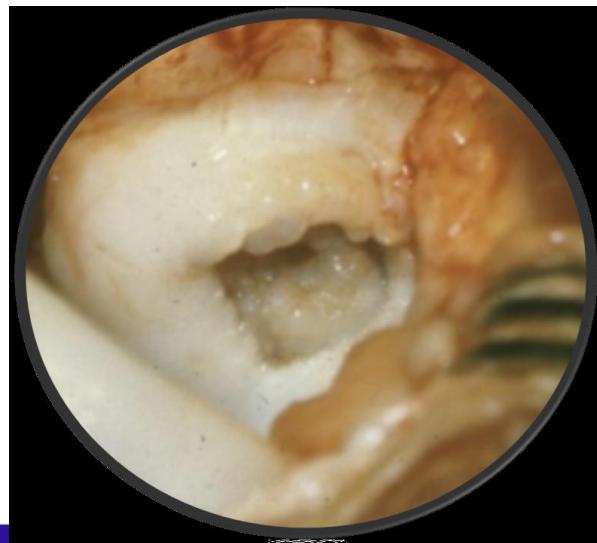
Age 10-15 y

M: F = 85 : 15

Dominant side

20% bilateral

Symptoms 1-2 y before appropriate treatment



Etiology

Forces / sports related

Ischemia / vascular

Age / Physis

Familial / genetic



**Adolescent
Osteochondritis
Dissecans**



Throwing

Wind up



Cocking



Acceleration



Deceleration

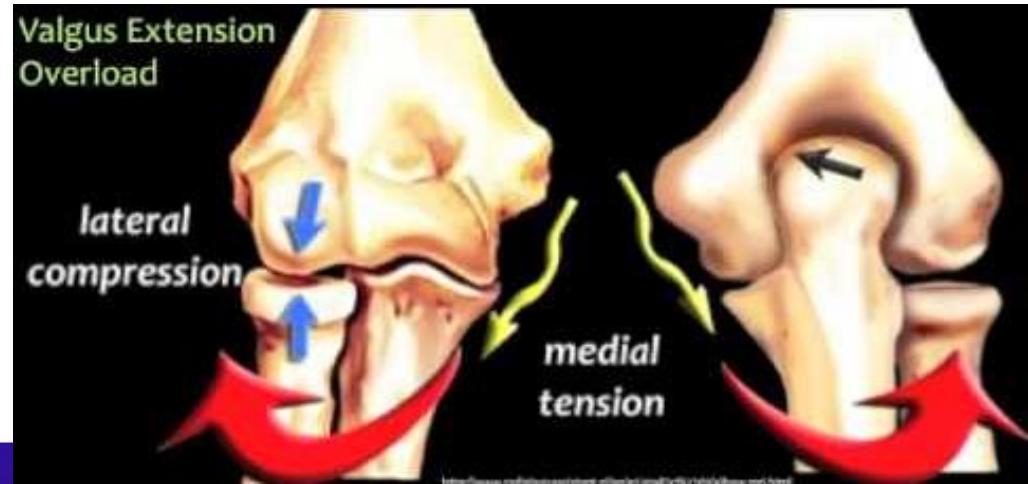
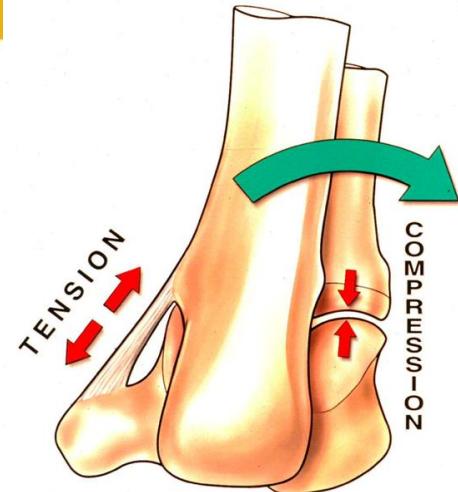


Overhead throwing

Medial tensile stress

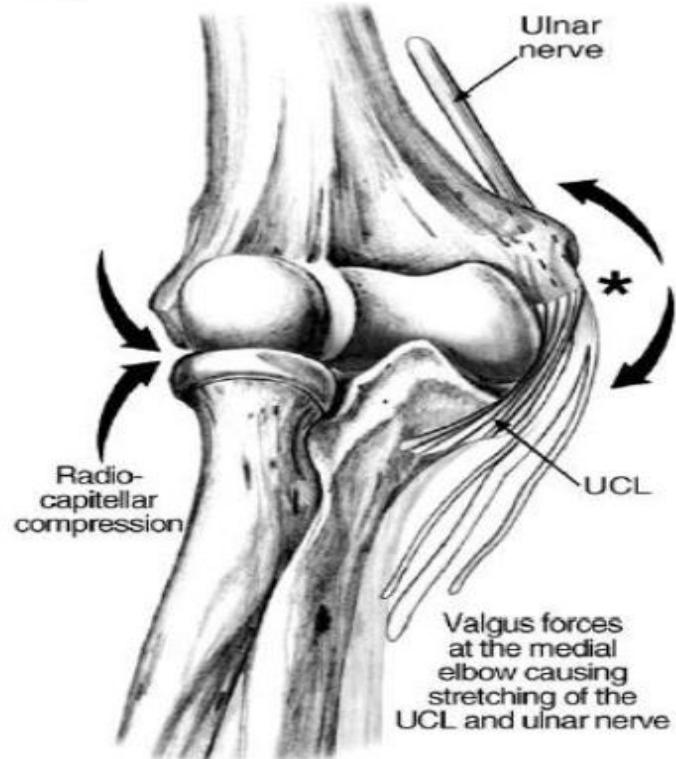
Lateral compression

Forced
(valgus) extension



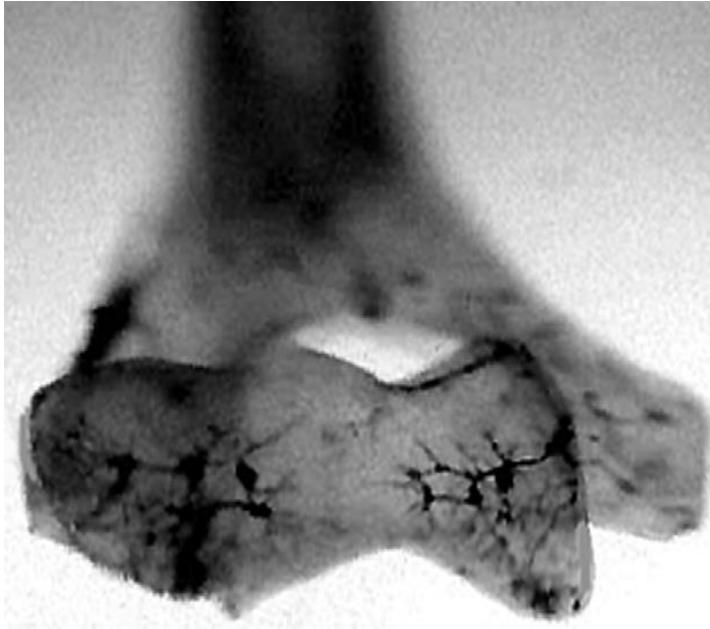
UCL insufficiency and OCD capitellum

67% higher peak pressure in lateral compartment after UCL rupture



“Vascular” anatomy

Anterior view



Posterior view



Kimball, JHS Am, 2007

Haraldsson , AOS, 1958

Yamaguchi , JBJS Am, 1997

History

Lateral elbow pain / tenderness

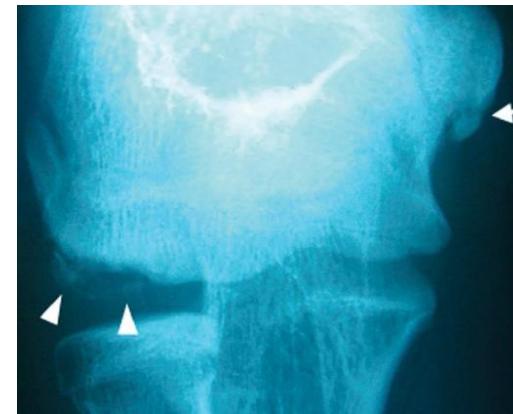
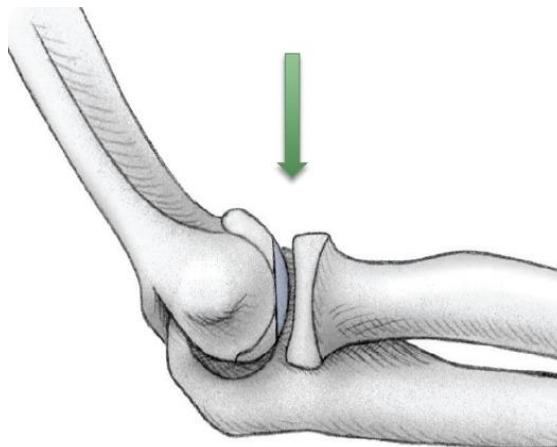
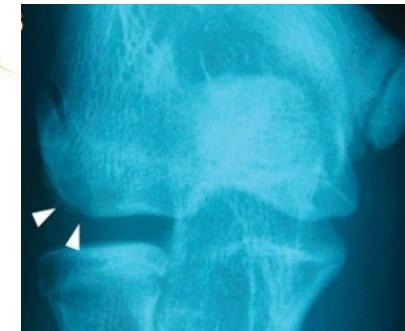
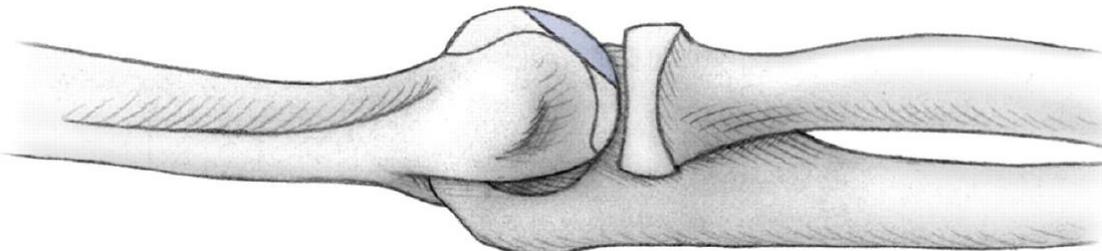
Swollen elbow / hydrops

Catching / locking complaints

Slight extension deficit



Radiology



Radiology



Classifications

Minami : plain radiographs

Itsubo: T2 MRI scans

ICRS: arthroscopy

Stable or unstable?

Table 3. ICRS classification system for grading osteochondritis dissecans

Grade	Description
1	Intact cartilage overlying the osteochondral fragmentation
2	Partial discontinuity of cartilage overlying the osteochondral fragmentation
3	Complete discontinuity of cartilage overlying the osteochondral fragmentation; fragment not displaced
4	Dislocated fragment or loose body

Non-operative treatment

- Relative rest
no overhead sports / throwing (3-6 weeks)
- Muscle strengthening exercises
- NSAID
- (short course of) immobilization
- Exercises for shoulder, elbow, and wrist
to prevent atrophy

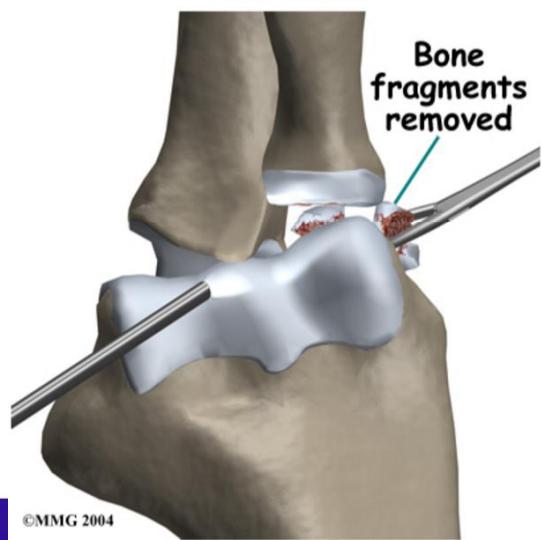
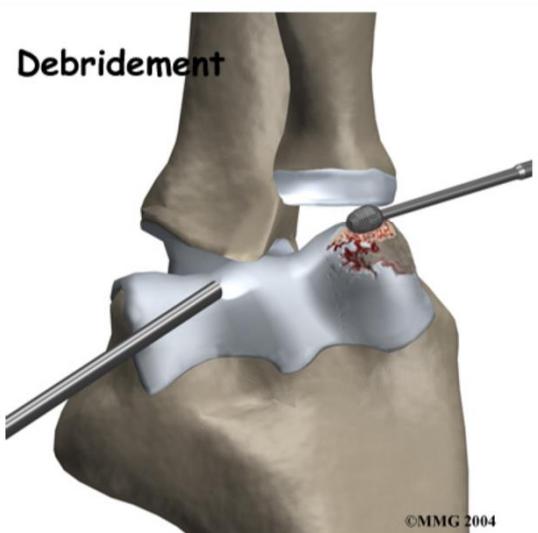


Operative treatment



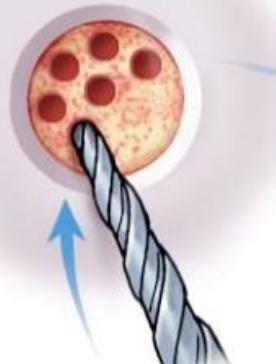
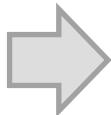
- Arthroscopy with debridement
 - and micro fracture
 - and removing loose bodies

- Open techniques
 - fixation of fragment
 - autograft



Operative treatment

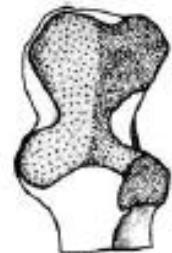
Arthroscopy with debridement and micro fracturing



Operative treatment



OCD?



3



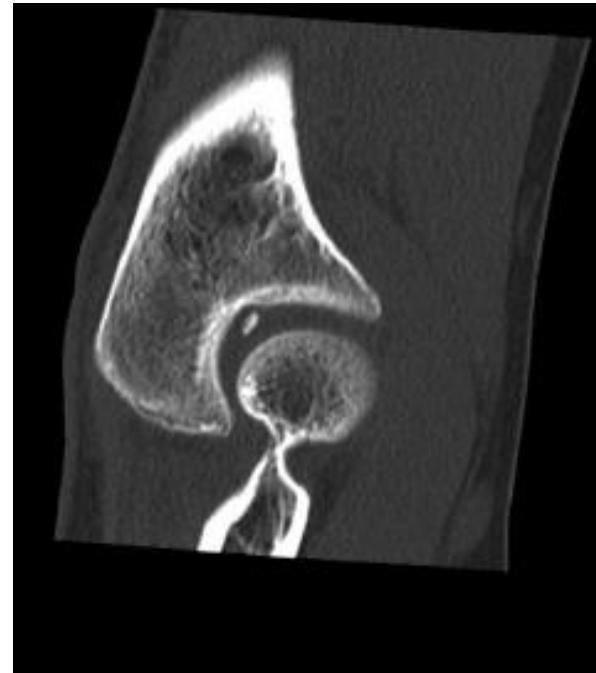
63



32



2



2



Vooral bij bovenhandse sporter

Diagnose pas vaak (te) laat gesteld

**Klinisch onderzoek en Rontgen foto niet altijd
betrouwbaar**

Behandeling vaak operatief middels arthroscopie



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