

Chondral and Osteochondral Fractures

Ali Al Belooshi

MB Bch LRCPSI FRCSC MBA

Orthopedic Consultant

Associate Professor MBRU

Orthocure Medical Center

Incidence

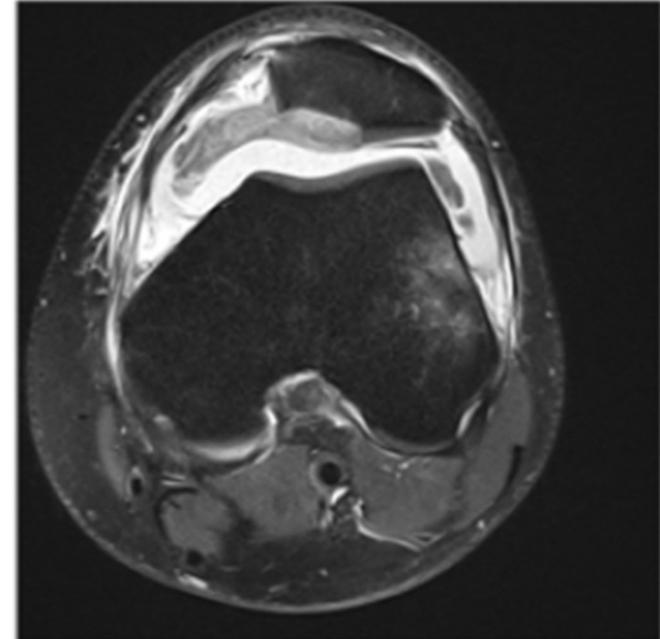
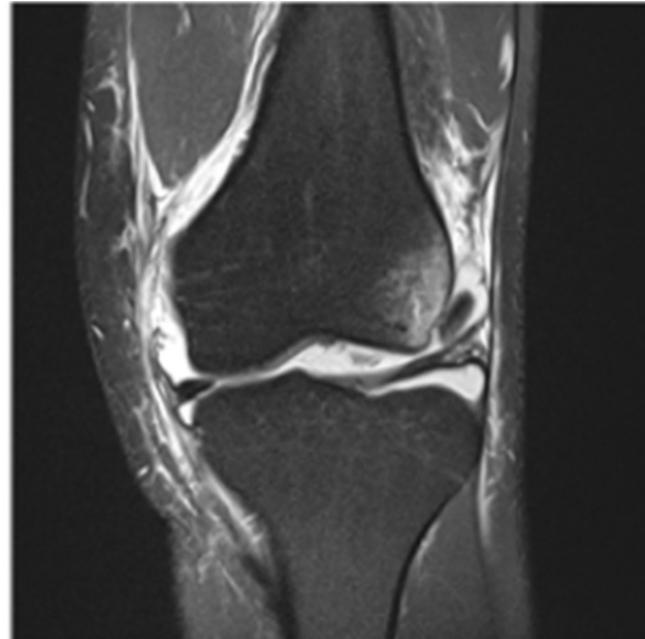
- Common injury
- Atraumatic: Osteochondritis desiccans
- Traumatic: Isolation or associated injuries:
 - Ligamentous tear
 - Patella dislocation
- Cartilage full thickness defect leads to Osteoarthritis
- Prognosis :
 - Size of lesion
 - Location
 - Alignment
 - Acute > chronic
 - Osteochondral lesions better than pure cartilage lesion
 - Age

Presentation

- Hemarthrosis & Swelling
- Locking
- Instability
- Pain
- Mechanism of injury !

Investigations

- Xray: helpful in osteochondral lesions
- CT
 - Size
 - Location
 - Bony attachment and depth
- MRI
 - Chondral lesion and planning surgery
- Arthroscopy Diagnostic and therapeutic



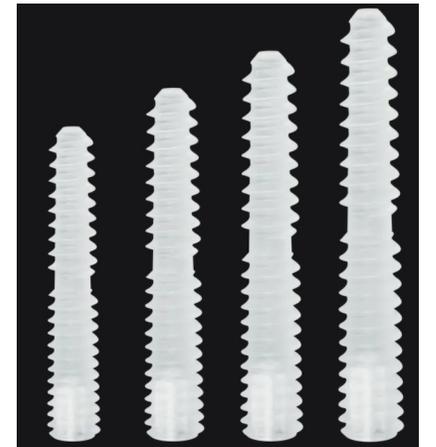
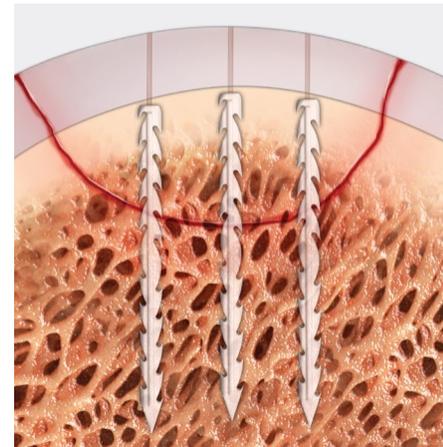
Management

Very Small fragment not fixable
debridement + microfracture

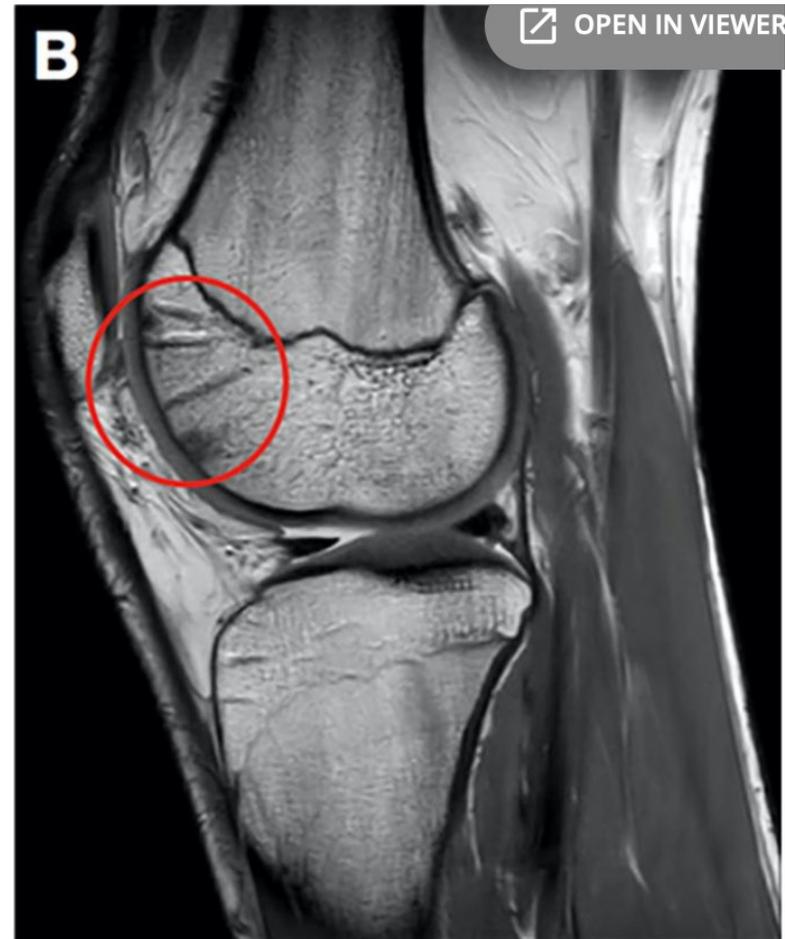
Large osteochondral and chondral
lesions fixation is a must

methods of fixation :

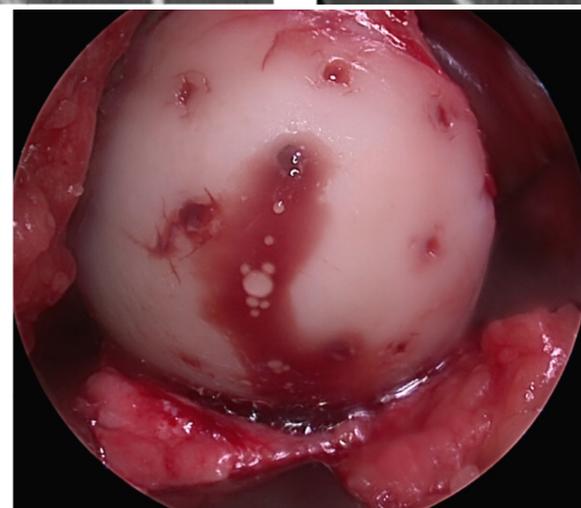
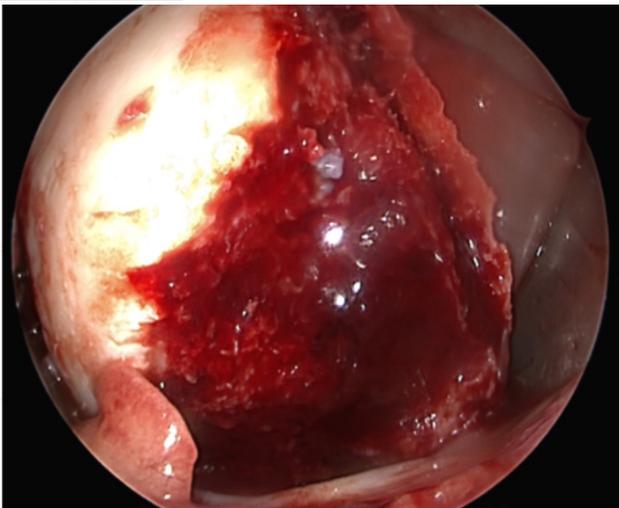
- Headless titanium screws
- Biodegradable screws
- Chondral Darts



Chondral fragment



Osteochondral Lesion



Rehab post surgery

- Important to start early ROM as tolerated
- Non weight bearing if lesion in the weight bearing area for six weeks
- Progress thereafter with weight bearing
- No contact sports for 4-6 months

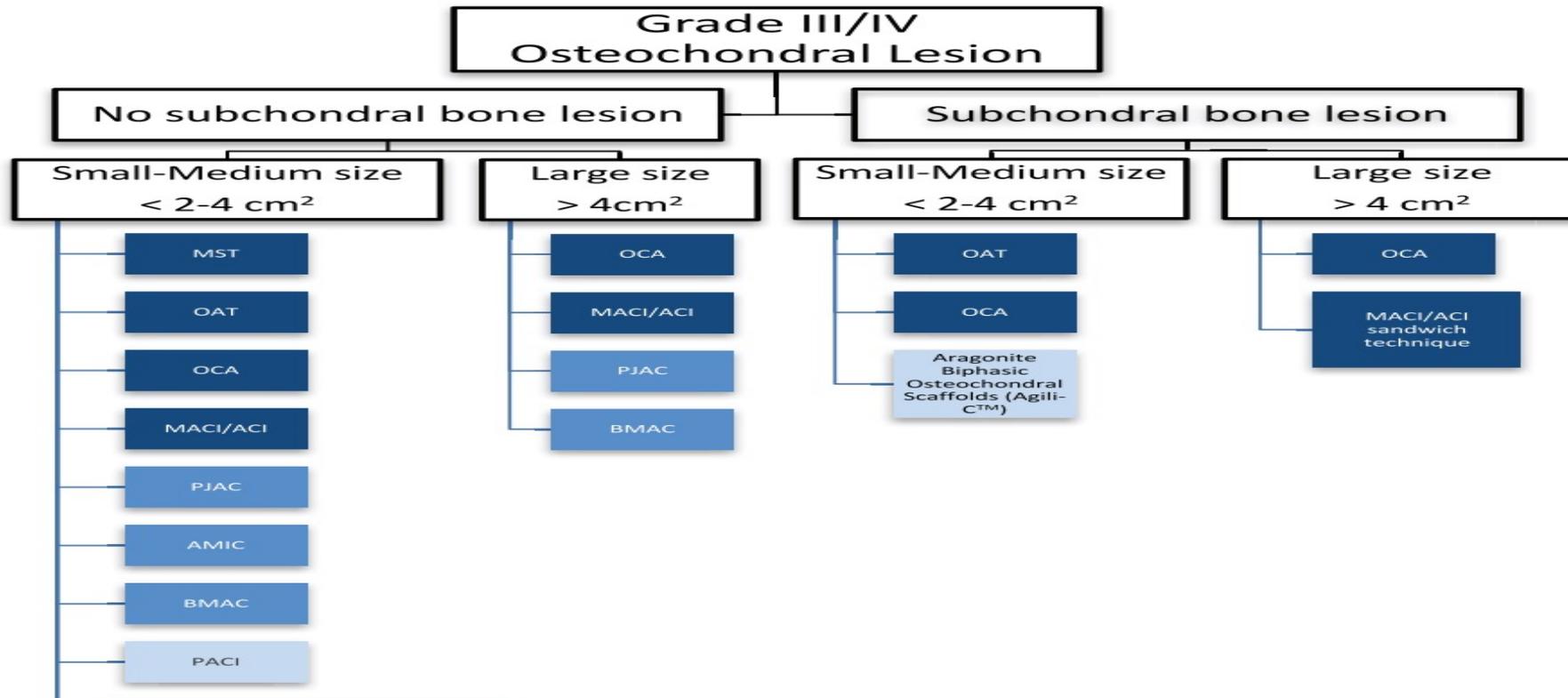
If not repairable or fixable

1. OATS
2. ACI or MACI
3. Osteochondral Allograft transplant
4. Scaffold Synthetics such as TRUFIT and Agili C

Check alignment and if required offload the injured side

Algorithm for Treatment of Focal Cartilage Defects of the Knee: Classic and New Procedures

Betina B. Hinckel¹, Dimitri Thomas², Evan E. Vellios³ , Kyle John Hancock⁴, Jacob G. Calcei⁵ , Seth L. Sherman⁶, Claire D. Eliasberg⁷, Tiago L. Fernandes⁸ , Jack Farr⁹, Christian Lattermann¹⁰, and Andreas H. Gomoll⁷



Conclusion

- Chondral and osteochondral lesion important to diagnose early
- Repair and fixation of large osteochondral or chondral lesion is a must
- Consider salvage procedure early to prevent osteoarthritis If fragments are not amenable to fixation
- Address malalignment to avoid failure of procedure