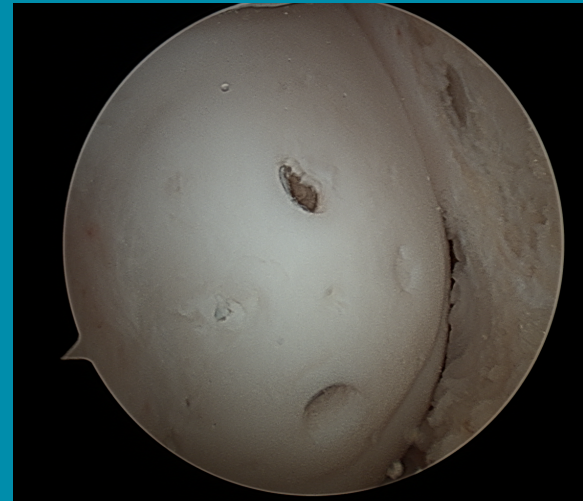
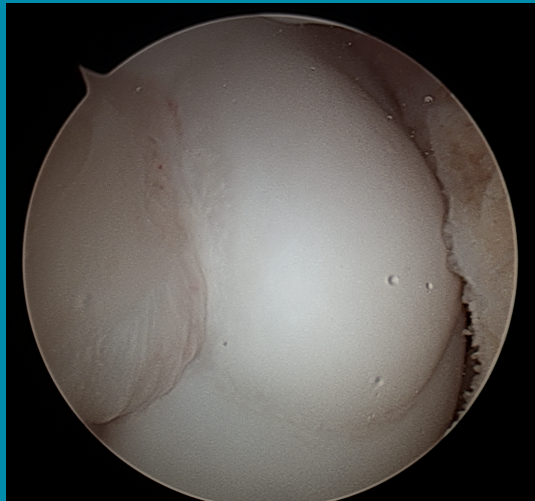


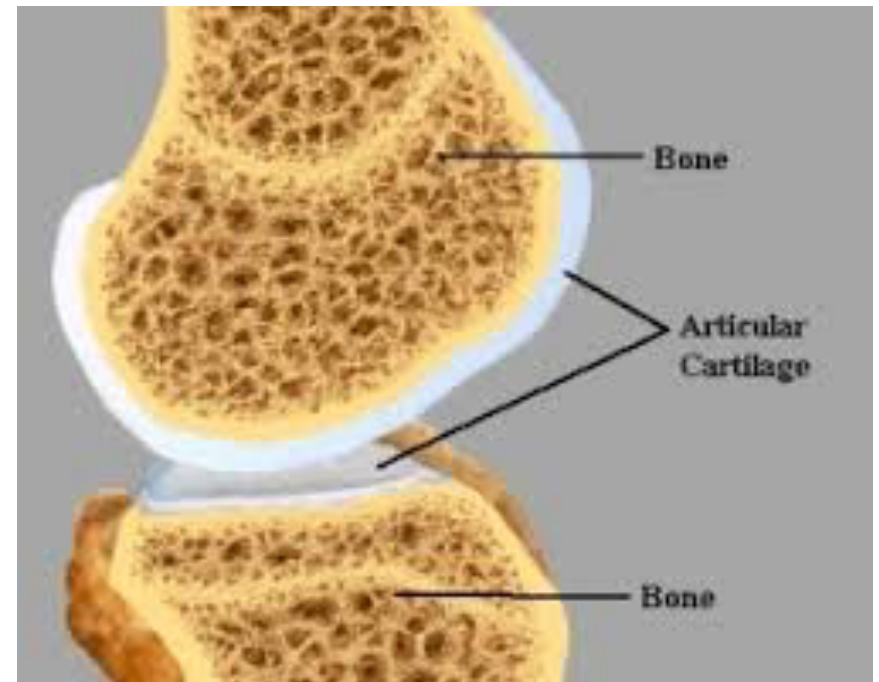
# Drilling and Fixation for Unstable Knee Osteochondritis Dissecans (OCD)



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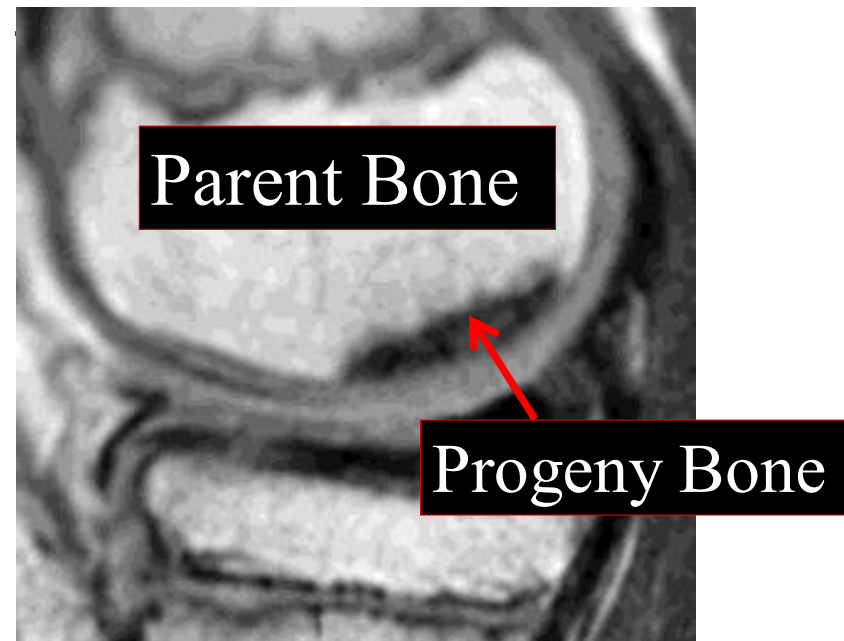
# Anatomy

- Cartilage covers the joint surface at end of a bone.
- When healthy, allows:
  - Range of motion
  - Shock absorption
- Poor healing ability



# What is OCD?

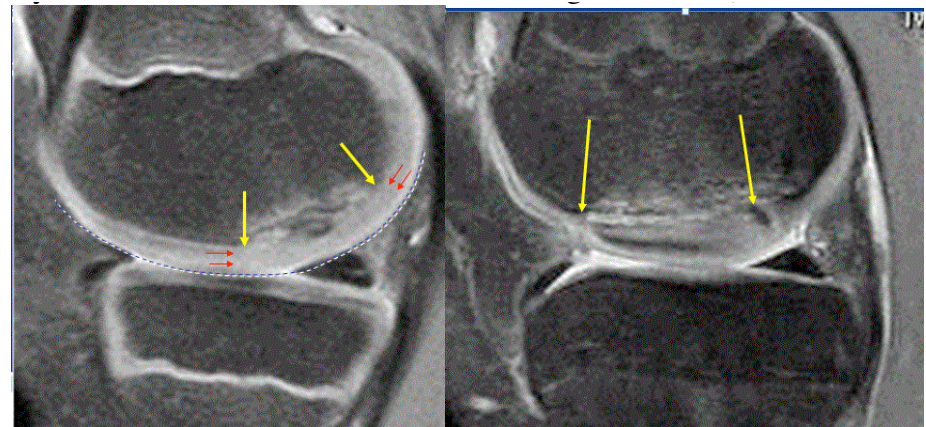
- **Injury to the bone** below the cartilage
  - Due to loss of blood supply from repetitive trauma
- Risk for instability and disruption of overlying cartilage
- **May result in early arthritis**
- Both knees in 25%



Can be a **3-4 procedure** problem

# Without surgery....

- The OCD **won't heal**
- Continued **pain**
- **Poor** long term **function**
- **Loose bodies**
- **Locking/catching**
- **Loss of motion**
- **Increased arthritis**
- **Decreased** return to sport



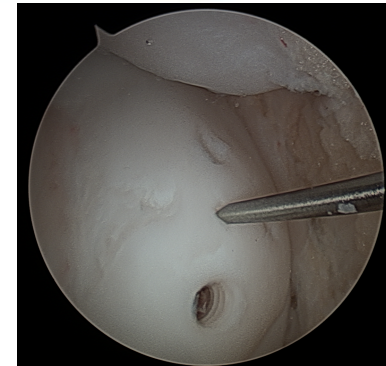
Stable MRI

Unstable MRI



# Knee Arthroscopy

- **Outpatient** surgery (go home same day)
- **General anesthesia** (asleep the whole surgery and won't feel anything)
- **Arthroscopic** surgery with small incisions
- Drill ~1mm holes into the defect to promote healing
- Fix unstable fragment with metal or bioabsorbable screws/tacks



# Salvageable Unstable Lesions - Fixation

- **No difference in outcomes**
- Bioabsorbable implants (chondral dart, smart nail, biocompression screw)
  - No need to remove
  - ? Cyst formation (with older technology)
- Metal screws
  - May need removal 6-8 weeks (time varies depending on screw choice)



# Complications and Expectations

- Anesthesia
- Bleeding
- Nerve injury
- Infection
- Stiffness
- Reoperation
- **Healing (85-95%)**
  - Average 6 months
- **Improved outcomes scores**

## Utility of Bioabsorbable Fixation of Osteochondral Lesions in the Adolescent Knee

Outcomes Analysis With Minimum 2-Year Follow-up

Internal fixation of juvenile osteochondritis  
dissecans lesions of the knee

Functional and radiographic outcomes of unstable  
juvenile osteochondritis dissecans of the knee  
treated with lesion fixation using bioabsorbable pins

Schlechter et al. *OJSM* 2019

Adachi et al. *JPO* 2015    Kocher et al. *AJSM* 2007

# What to expect after surgery

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- Non-weightbearing with crutches
- No brace
- Back to school/work within a few days
- **Physical therapy** starts 3-4 days after surgery
- **Return to sports** typically **6-9 months**
  -

# Conclusions

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- Goals = stabilize OCD lesion, stimulate healing, return to sports
  - Surgery generally results in OCD healing and improved outcomes
  - Low rate of complications
  - Slow, progressive rehabilitation is key
  - Return to sports (6-9 months)

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