

Osteochondritis Dessicans (OCD) of the knee

Anatomy & disease process

During development, cartilage is slowly replaced by bone. This leaves a thin shell of smooth joint surface lining cartilage that covers the underlying bone. Occasionally, a piece of the underlying bone separates with the overlying cartilage remaining intact (stable OCD lesion). However, when the overlying cartilage separate with the bone, joint fluid can wash under the bone and prevent bone healing (unstable OCD lesion). In severe cases the bone and cartilage fragment can become loose within the joint. The most common joint involved is the knee, but also the ankle and elbow can be affected.

This process occurs during development, usually around the ages of 10 to 15. The younger the onset, the more likely the lesion will heal on its own, with restriction of activities and sports for a period of 6 months or more. A larger lesion presenting at a later age is less likely to heal on its own.

Investigation

X-ray lets us see the lesion. To try and work out which lesions will heal, an MRI is useful. On the MRI, lesions with joint fluid behind them usually require operative intervention to achieve fragment healing.



MRI image showing fluid under OCD lesion

Non-operative treatments

Activity restriction is the usual first line of treatment. Younger patients with bones that are still growing are most likely to respond to this line of treatment. If activity restriction does not work after a long period, then operative intervention can be indicated.

Operative treatments

Operative options begin with arthroscopy (key hole surgery) to assess the cartilage overlying the lesion.



2. Assessing how mobile the fragment is

Drilling holes across the unhealed base of the lesion can simulate the bone to heal completely. If the fragment is loose,



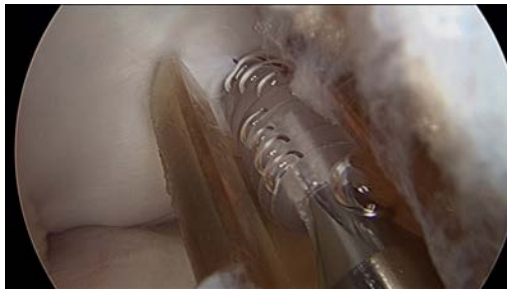
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3. Very mobile!

then the fragment needs to be lifted, the base debrided and the fragment fixed back into place with either absorbable or non-absorbable screws or nails.



4. Pinning back into place

These screws are placed below the cartilage surface to avoid scratching the matching cartilage surface.



5. Final stable lesion. This will heal and smooth off. The pins will dissolve in time.

This can require converting to an open operation. Occasionally the fragment is completely detached and irreparable. The fragment is removed and the bone bed debrided.

Complications

- Failure to heal
- Hardware complications
- Numbness adjacent to wounds
- Stiffness
- Blood Clots
- Infections

Rehabilitation / Recovery

Rehabilitation after operation requires 6 weeks of non-weight bearing through the joint, and using crutches for up to 3 months.



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