

## Transplant of Knee Cartilage Through Small Incisions Fernando A. Moya, M.D., Ph.D. 954-430-9901

One of the most difficult things that Orthopedic Surgeons have to deal with is what to do with the knee that has irreversible cartilage damage. The knee joint, specifically the undersurface of the patella, the end of the femur and the top of the tibia are covered by a substance we call articular cartilage. This looks and functions like the carpet that is covering the floor in your house. It is a smooth cushioned surface that helps the knee joint move in a frictionless environment. Without healthy articular cartilage the knee joint can not function properly. Exposed bone in the knee joint by deficient, inefficient cartilage leads to arthritis, pain and disability.

Patients present to the office stating that they injured the knee joint. They complain of swelling, pain going up and down stairs, getting out of the car, changing directions, unable to run or jog without pain. The injury is usually after an event that the patient can recall without any problems. The Orthopedic Surgeon gets some simple X-Rays in the office and usually they are normal. You see articular cartilage does not show up in X-rays. After a thorough physical exam the initially treatment usually consist of ice, rest, anti-inflammatory medications and physical therapy. However if the initial physical exam demonstrates severe findings and or the symptoms persist or they do not resolved then the patient will need to get an MRI Scan to check for articular cartilage problems. The MRI Scan is the diagnostic study of choice in the detection of articular cartilage damage (bottom photo), meniscus tears and ligament injuries.

If the patients has an articular cartilage defect (bottom photo) this is considered to be a permanent problem for the knee joint. This leads to abnormal friction forces, inflammation, pain and eventual destruction of the rest of the knee joint. Classically patients who continued to have problems eventually developed arthritis and require a total knee replacement. Today with advances in science we can offer patients alternatives to try to salvage the knee joint. This consists of procedures that can be done through small incisions in the knee joint (Arthroscopic Surgery).

The arthroscope is the instrument that has allowed us to manage this issue through small incisions. We can do a chondroplasty with shaving, chondroplasty micro fracture or bone drilling or bone picking. The chondroplasty is stimulating your cartilage, stimulating your body to make new cartilage in the defective area. The recovery from this type of surgery usually requires the patient to use crutches for one month and in most cases the patient's returns to full unrestricted sports activities in 6-9 months from the day of the surgery.

Other patients can have a *transplant of cartilage* (top photo) This is usually reserved for those patients who failed to heal with the chondroplasty and have a focal well circumscribe defect in the articular cartilage. The surgery is also done through mini incisions, usually two or three. The rehabilitation consists of crutches for 4-6 weeks and range of motion exercises. After this healing period the patient returns to activities of daily living and finally to sports within 6-9 months from the day of the surgery.

