CAPE FEAR SPORTS MEDICINE

Cartilage Repair

Cartilage repair procedures are in the forefront of both research and interest, both stimulating new cartilage growth as well as replacing damaged areas of cartilage with biologic materials that mimic and help augment the body's reparative potential. There are several ways these can be carried out. In general though, cartilage implant procedures are done primarily when there is an injury to the joint surface with well preserved margins or "shoulders" of the cartilage where the majority of the joint is still normal, but a portion of the joint has been damaged. This allows for better outcomes than in those individuals that have diffuse damage throughout the joint surface. These cases are typically non amenable to cartilage implant type procedures.

There are several types of procedures that are now available. One is an OATS procedure where a cartilage is transferred from one's own knee to a defect using a plug of cartilage and bone. This has excellent outcomes and is well used for lesions that are approximately a centimeter or smaller in size. These are especially used on the weightbearing surfaces of the condyles of the femur. More recently, procedures have been directed at the irregular surfaces of the patellofemoral joint including the trochlear sulcus which is a grooved structure that articulates with the patella or knee cap. Because of the irregularity of the surface, the convex and concave components that cartilage implant procedures in these locations can provide significant benefit if they are somewhat more flexible.

There are several types or options of flexibility at this point and these include whole cartilage grafting that includes the normal bony layer and structural constituents of the entire cartilage surface including the underlying bone as well as implant procedures that stimulate the underlying bone and then provide for tissue that serves as a structural allograft. These can be used in differing circumstances depending on the location of the lesion and size of the lesion primarily, but provide at this point uncertain exact outcomes, but are certainly promising.

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