

Novel Autologous Chondrocyte Implantation Restores Young Sports-persons to Their Sport in India

Autologous chondrocyte implantation by MJRC clinic nips cartilage damage in the bud, allowing athletes to continue enjoying their game without any worry of progressive damage

Chennai, Tamil Nadu ([PRWEB](#)) April 22, 2014 -- The recently introduced Autologous chondrocyte implantation is a novel procedure to treat sports persons. It repairs early cartilage damage in sports persons, and restores joints to normal. It prevents further progression to arthritis. It is thus great news for thousands of sports persons with in India.

It utilizes the patient's own cartilage cells to repair areas of cartilage damage. Largely applicable to the knee, it can also be used to repair cartilage lesions in the ankle, shoulder and possibly other large joints.

It is a two stage procedure. The first stage consists of harvesting a small piece of cartilage from the non-weight portion of the knee. This plug is sent to a laboratory in India. Here scientists extract cells from this plug and grow it several million fold in culture. The multiplied cells are sent to the surgeon after four weeks in culture. The orthopedic surgeon prepares the damaged area through a small open or key-hole procedure and implants the cells. The cells then go on to repair the damage over the next few months. After a year, original or hyaline cartilage grows back to repair the damage in most cases. In a small number, reparative cartilage grows over to cover the defect. In both cases the patients get pain relief. This procedure is a fourth generation procedure and is known as a 'cell gell' technique.

Orthopedic surgeon Dr.A.K.Venkatachalam, FRCS, M.Ch Orth, MS Orth, DNB Orth, (www.kneeindia.com) has performed this procedure in a thirty eight year old male patient.

Case report-

The patient is a business man from a neighboring country. He developed knee pain from routine activities over the course of few years. He had symptoms of pain and grinding. He consulted Dr.Venkatachalam in Chennai about three months back. High resolution MRI scans revealed two areas of cartilage damage in the patella and adjacent part of the medial femoral condyle. This was confirmed at arthroscopic evaluation. During this procedure, a small piece of cartilage was removed from the non load bearing part of the knee and dispatched to the laboratory. cartilage cells were grown to increase their number to 48 million. Four weeks later Dr.Venkatachalam implanted the cartilage by an open procedure. Usually a minimally invasive procedure is sufficient but in this case, since there were two lesions it required an open procedure to treat both of them adequately. The patient has already got pain relief. He no longer feels a grinding feeling in his knee. He has been started on a rehabilitation program. He will be wearing a range of motion knee brace for a short period and will avoid full weight bearing. He will get full mobility in his knee after three months.

Cartilage lesions are the pre cursor to osteo-arthritis. They have the potential to progress to osteo-arthritis. They are caused by sports, accidents, obesity, mal alignment and thermal injuries. Cartilage injury is suspected when the patient has long standing joint pain during activities. Initially x rays may be normal. Only high resolution MRI scans can pick it up in the early stages. Cartilage lesions are increasing in incidence all over the world. Most patients are young. They often have associated ligament injuries. Mal-alignment of the limb may be also present. The other associated injuries also need prior treatment.

To be eligible for this procedure, the patient should not be obese and have a stable knee. Additional problems should be treated prior or can be combined with this procedure.

Autologous chondrocyte implantation is a new procedure in India. It was introduced in 1994 in Sweden. It has enjoyed a good success rate abroad. Earlier techniques need a scaffold to be sutured over the defect. The current fourth generation technique uses a fibrin base cell gel technique and needs no suturing. It can be performed by key hole or minimally invasive method.

Dr.A.K.Venkatachalam is one of the few surgeons to have performed this procedure in the country. Dr.A.K.Venkatachalam specializes in joint replacements of knee, hip and shoulder. He was the first surgeon to introduce the Journey Oxinium™ knee in India. He has the distinction of tweeting the first live knee replacement in India in June 2009. He was among the first surgeons to introduce custom fit knee replacement in Chennai. He started doing neck sparing or short stem hip replacements in 2006. He also has a keen interest in arthroscopic surgery of the knee. He is one of the first to introduce bio-medical treatments like autologous chondrocyte implantation in Chennai, India.

For more information, visit <http://www.kneeindia.com>.

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