Knees

Consultant Profile

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Surgeon Profile:
Mr Sanjiv Jari is a consultant lower limb and orthopaedic sports medicine surgeon at Hope Hospital. He is also an honorary clinical lecturer in orthopaedic and trauma surgery at the University of Manchester.

Mr Jari trained in London and Manchester, following which he worked in the USA for a year at a prestigious sports medicine clinic treating, amongst other things, injuries in elite and professional athletes. He was a sports medicine consultant to the 2002 Commonwealth Games in Manchester and he is currently the orthopaedic surgeon to the Great British Olympic Wrestling squad.

Mr Jari's NHS practice involves lower limb and trauma surgery, in addition to sports injury, he has a large practice in arthritis surgery and specialises in minimally invasive total and half knee replacements.

For further information or to book an appointment please call 0161 232 2303 or email info@spiremanchester.com

ARTICULAR CARTILAGE TRANSPLANTATION IN THE KNEE – DOES IT REALLY WORK?

If we damage the cartilage in our knee joint this can be a permanent problem. This particular part of our body is very poor at healing and regenerating. As we get older the articular cartilage (the lining in our knee) begins to thin and wears out. This can be due to arthritis or in younger patients is usually caused by trauma, which could be caused by a fall or other injury to the knee such as from sports. Fragments of bone moving around inside the joint (Osteochondritis dessicans) can also cause damage to the knee cartilage in younger people.

If the articular cartilage (lining of the knee) is not going to heal itself, is there anything that we can do to help?

Initially, treatments specifically for the knee revolved around trying to create bleeding within the area of bone which was exposed (microfracture) and roughening the bone (abrasion). These techniques aimed to encourage some tissue to grow, however the problem was that the tissue that formed was mainly scar tissue rather than normal cartilage. Scar tissue does not have the durability of normal cartilage and tends to break down more easily (quickly).

Treatment techniques moved on and other options were then tried such as the OATS procedures, where a plug(s) of bone and cartilage from another part of the knee was removed and transplanted into the problem area but the results from this have also been mixed for various technical reasons.

Some years ago in Sweden, a procedure called articular cartilage transplantation was developed and has been used on many patients successfully. Initially this technique was used on small areas of traumatic lining surface damage usually caused by injuries to the knee. Our experience has grown over the years and now it is something that can be done for more significant problems including some cases of arthritis in the knee.

The treatment involves two stages of surgery. The first stage is to take a piece of healthy knee cartilage (a chondral or osteochondral biopsy), which is usually done by keyhole surgery (arthroscopically). This tissue is then sent to the laboratory where the scientists work their magic and grow the cartilage cells. Most surgeons then request the cells to be implanted on to a collagen membrane and at the second operation, the collagen membrane is attached into the damaged area of the knee.

Following surgery rehabilitation with physiotherapy and specific exercises are key to achieving a good result. It may take a fairly long time to recover because the rehabilitation is a gradual process. Prior to the operation the patient may have other problems affecting the knee such as ligament damage or kneecap dislocation. These should be addressed either before the transplantation surgery or during that surgery.

Continual studies of this method of treatment are re-assuring as they show that the transplanted cartilage over time has a high volume of normal cartilage not scar tissue. There is still some scar tissue but the aim of creating normal cartilage and a better result for patients can be achieved.

Case study; Mr S A

When I first saw Mr S A, he was having problems with both knees, more so on the right and had symptoms that were very typical of patella femoral (kneecap) problems with pain at the front of his knee. The pain was worse going up and down stairs and if he had been sitting down for a length of time. He did not have any swelling, locking or giving way and did not recall any injury. He played table tennis 3 or 4 times a week but his knee was starting to impact on how much he could play.

He tried a number of treatments, including physiotherapy, podiatry, injections of Hyaluronic Acid and steroids and eventually underwent an arthroscopic debridement, which involved removal of damaged tissue within the knee using a keyhole surgery. This operation reavealed an area of localised degenerative change in his trochlea (one part of the kneecap joint). His knee cap was also not moving correctly along the groove in his thigh bone (mal-tracking patella). The arthroscopic debridement helped him for a period of time but then his symptoms recurred. At this point I discussed cartilage transplantation with him as I felt it was the best option to maintain his quality of life at that point.

He underwent the first stage of the transplantation which was a biopsy of his cartilage. The second, minimally invasive stage, was then performed about a month later. At this time I also surgically corrected the alignment problem in his kneecap to prevent further excessive wear on the transplanted area.

The patient and I were very pleased with his recovery. He needed further physiotherapy and he went on to take up competitive road cycling, as well as continuing with his table tennis.

Every patient is an individual and knee problems can be caused by a number of conditions, but for many patients this can be a very successful operation.

In patients who are too advanced for a cartilage transplantation, or may be too old for the procedure, there are other, minimally invasive, partial resurfacing options using small metal caps to resurface the area (rather than replace the whole knee) which can work very well.

If you require any further information regarding cartilage transplantation, please go to www.thekneedoc.co.uk or feel free to make an appointment to see Mr Jari.