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‘Cure for cartilage, bone defects too’

Arthritis, knee or severe joint and hip pain could be due to cartilage damage, and doctors advise that patients not ignore this condition as the pain can be mitigated. **Autologous Chondrocyte Implantation (ACI)** is a process that uses the patient’s own cartilage cells to restore the affected cartilage, explains Dr Hemant Kalyan, senior orthopaedic surgeon at Manipal Hospital.

Thirty-two year-old Lekshmi V., a mother of one child, had lost hope of living a pain-free life when she was diagnosed with a cartilage defect in her knee. Her X-ray report showed everything was fine. But an MRI report showed a small piece of floating cartilage which was the cause of the constant pain. Addressing the media about the case, Dr Hemant said: “ACI was the best solution in the case of Lekshmi. A biopsy of the healthy cartilage tissue was taken from her knee through keyhole surgery and then **sent to the cell processing centre at Regenerative Medical Services (RMS) in Mumbai where the chondrocytes (cartilage cells)** were isolated from the tissue and proliferated in a culture medium. After four weeks the cells were re-implanted into the defect site of her knee.”

After eight weeks Lekshmi was free from pain and is leading a normal life now. In the case of bone degradation, **Autologous Bone Implantation (ABI)** has been a successful procedure. Here, bone cells are harvested, cultured and implanted. After undergoing ABI, Vinod Patil, who suffered from bilateral (both hips) degradation of bone is now able to walk and work normally.

When asked about its advantages over other existing forms of treatment, Dr Hemant said: “Cartilage defects affect 61% of middle-aged adults and almost 80% of these defects lead to functional problems among patients. Most cartilage disorders are dealt with invasive treatment which brings limited results. With ACI and ABI the results are far better. As of now, at our hospital we have five patients and they are responding very well.”

He adds that the response from other countries like the UK, Korea, Singapore and the Netherlands has been very positive.