

A Case Report On Repair Of Patellar Osteochondral Defect Using Osteochondral Scaffold

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INTRODUCTION:

Various methods of repair for patellar osteochondral defect like direct chondral suturing, autologous chondrocyte transplantation, micro-fracture and osteochondral scaffold are currently available.

MATERIALS & METHODS:

Due to a fall, a 16-year-old girl had left knee pain and locking knee for 2 months. Post fall, patient had left patella dislocation. On examination of left knee; there was no swelling, no tenderness, full range of motion and no ligament laxity.

Diagnostic scope, noted osteochondral defect (3x1.5cm) at medial facet left patella (Outerbridge IV) and loose body (3x1.5cm) in the left knee joint. An open method via medial patella approach was used. The patella osteochondral defect was repaired using a multilayer biomimetic osteochondral scaffold.

Post operatively, the knee was immobilize for 2 weeks and subsequently allowed full range of motion.

RESULTS:

Patient resumes her daily activities by 6 weeks. Lysholm knee scoring scale was used in this case; pre-operation: 41, 6 weeks post operation: 92, 3 months post operation: 96.

DISCUSSIONS:

In our setting, there are limited facilities for autologous cell base therapy. Multilayered biomimetic osteochondral scaffold is easy to use and does not required expensive equipments. Direct chondral suturing is suitable for acute lesions at weight bearing areas. For lesions $>2\text{cm}^2$, result for micro-fracture is unsatisfactory¹. Osteochondral scaffold offered significant clinical better results compared to bone marrow stimulation in the treatment of osteochondral lesions².

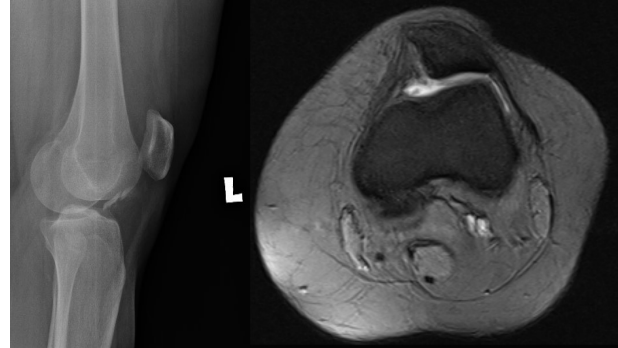


Figure 1: X-ray left knee showed loose bodies within the left knee intra-articularly. MRI left knee showed left patello-femoral dislocation associated with osteochondral fracture.

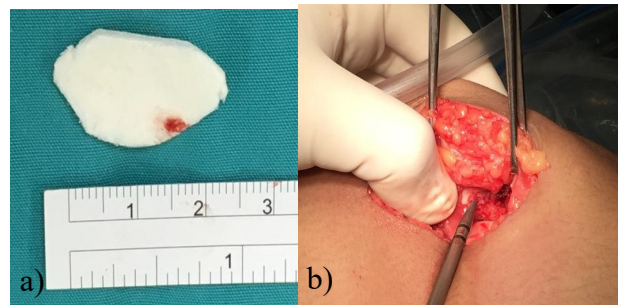


Figure 2: a) Multilayer biomimetic osteochondral scaffold. b) Focal osteochondral defect of patella

CONCLUSION:

Multilayer biomimetic osteochondral scaffold is an effective one step treatment for large focal osteochondral defects.

REFERENCES:

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