MIIG™ 115 Minimally-Invasive Injectable Graft

An Injectable Solution For Complex Tibia Plateau Fractures

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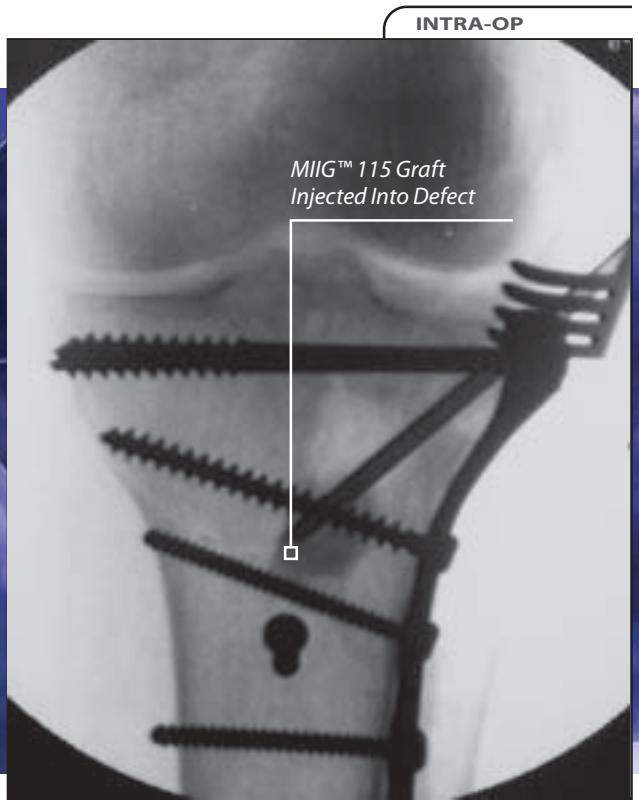


INTRODUCTION

Tibia plateau fractures with large depressions require disimpaction and elevation of the tibial plateau. A challenging aspect of this procedure is providing a buttress against axial compression so that the elevated plateau can be maintained while healing occurs. Although the depressed fragments can sometimes be elevated en masse, the reduction is often tenuous and unstable, with variable sized defects remaining. The MIIG™ Injectable Graft allows for filling of the defect with a material which hardens to the compressive strength of cancellous bone, and is eventually replaced by bone via creeping substitution.

PATIENT PROFILE

A 25-year-old male suffered a split-depression type lateral tibial plateau fracture with a minimally displaced medial split as a result of a motorcycle accident. The patient presented in stable condition and surgery was performed approximately one week after surgery, when soft tissue swelling had resolved.

SURGICAL METHOD

Exposure was obtained via a lateral hockey stick incision. An elevator was utilized to facilitate disimpaction and elevation of the depressed portion of the joint line. Once the fragments were reduced, stable fixation was obtained utilizing a lateral buttress plate and screws. The MIIG™ injection needle was placed inside the defect, and the MIIG™ graft material was then mixed on the back table. Injection of the material was facilitated with fluoroscopic guidance.

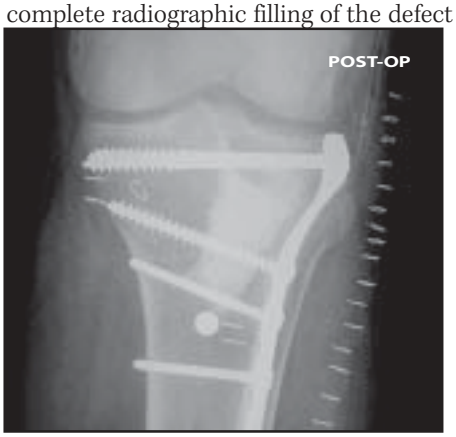
POST-OPERATIVE COURSE

The patient was placed in an hinged brace and began physical therapy at one week. He returned to work on a limited basis at four weeks and to full activities at three months. Gradual resorption of the MIIG™ graft material was observed at each follow-up interval, and bone repair was evident at the margins of the defect.

DISCUSSION

There were no complications or adverse events associated with the injectable material.

At three months post-op the MIIG™ graft material had resorbed approximately 50% of it's original volume. At six months, complete radiographic resorption of the MIIG™ graft material was observed with complete radiographic filling of the defect



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