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Reconstruction of distal femur medial column with fibular strut graft and on-lay plate augmentation in a 33c2.3 fracture with critical bone loss, a novel technique and its outcome.

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Introduction: Open fractures involving the distal femur are secondary to high velocity trauma. These patients often exhibit critical bone defects, which pose a serious therapeutic challenge.

Case: A 19 years old male presented with an open fracture involving the right distal femur with substantial bone loss, involving near total metaphysis, mostly the medial column, part of the diaphysis and an articular fracture. The patient also had an ipsilateral patella and an extra articular proximal tibia fracture at the metaphysio-diaphysial junction. We planned for a two-staged intervention, where in the first stage we treated soft tissue injury defects along with definitive primary fixation of tibia and patella; we also stabilized the limb with

a spanning external fixator. In the second stage we reconstructed the distal medial column with an appropriate size fibular strut graft, augmenting it with a reconstruction plate (novel technique). We followed up for two years, achieving osteosynthesis, perfect graft integration and consolidation, good functional outcome and an unaided painless ambulation.

Conclusion: Preservation of biology with appropriate bone and soft tissue management, stabilization with a biomechanically superior construct of strut graft - plate combination to facilitate early mobilization, are key factors in completing the injury cycle and restoring the function of the damaged limb.

Biography

Soutrik Mukherjee, is an orthopaedic trauma surgeon who works with a Government Medical College along with two private hospitals in West Bengal, India. He has a masters degree in Orthopaedic surgery and has also done a fellowship in complex trauma and pelvi-acetabular surgery. He has a public practice of three years and a private practice of about four years. He has presented his works on many national and international conferences over the years

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