

Salvaging refractory lower leg Infections with Masquelet Induced Membrane Technique: a case series

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Introduction:

The Masquelet Induced Membrane Technique (MIMT) is typically employed for open fractures with extensive bone defects. However, its potential in salvaging recalcitrant lower leg infections following failed conventional fracture treatments remains underexplored. We present outcomes from utilizing MIMT in four challenging cases where conventional treatment of high-energy injuries resulted in chronic infections and non-unions.

Materials & Methods:

This retrospective study analyzes patient data over five years. Skimming through patient data from about 20 MIMT cases, we selected those who underwent revisions of failed conventional treatment for tibial fractures. Detailed descriptions of patient demographics, infection characteristics, surgical procedures, and postoperative management are provided.

Results:

Four patients were included in this study, reflecting diverse demographics and medical histories. Fixation methods varied, including plating, intramedullary nailing, and external fixation. Infection control, bone consolidation, and soft tissue healing were achieved effectively. Radiographic assessments confirmed successful bone union. Patient satisfaction was high, with minimal complications recorded during follow-up.

Discussion:

This case series highlights the innovative potential of MIMT in salvaging recalcitrant lower leg infections following failed conventional fracture treatments. Despite heterogeneous patient profiles and varied fixation methods, consistent positive outcomes have been achieved, further underscoring the versatility and efficacy of MIMT.

Keywords:

Tibial fracture treatment, salvage, induced membrane, Masquelet technique