

Comparison of Patient-Reported Outcomes at 1 Year After Injury Between Limb Salvage and Amputation: A Prospective Cohort Study

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Purpose: This single-center, prospective cohort study aimed to compare the patient-reported outcomes at 1 year after injury between limb salvage and amputation and to elucidate whether amputation contributes to early recovery of functionality and quality of life.

Methods: We included 47 limbs of 45 patients with severe open fractures of the lower limb and categorized them into limb salvage and amputation groups. Data on patient-reported outcomes at 1 year after injury were obtained from the Database of Orthopaedic Trauma by the Japanese Society for Fracture Repair at our center. Patients' limbs were evaluated using the lower extremity functional scale and Short-Form 8. Early recovery was evaluated using functionality and quality-of-life questionnaires.

Results: Of the 47 limbs, 34 limbs of 34 patients were salvaged and 13 limbs of 11 patients were amputated. Significant differences were noted between the limb salvage and amputation groups in terms of the lower extremity functional scale scores (mean: 49.5 vs 33.1, $P = 0.025$) and scores for the mental health component (mean: 48.7 vs 38.7, $P = 0.003$), role-physical component (mean: 42.2 vs 33.3, $P = 0.026$), and mental component summary (mean: 48.2 vs 41.3, $P = 0.042$) of the Short-Form 8. The limb salvage group had better scores than the amputation group.

Conclusions: As reconstruction technology has advanced and limb salvaging has become possible, the focus of studies should now be based on the perspective of "how the patient feels;" hence, we believe that the results of this study, which is based on patient-reported outcomes, are meaningful.