Assessment of Recovery From Geriatric Ankle Fracture Using The Life Space Mobility Assessment (LSA)

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Introduction/Purpose: Ankle fractures are the third most common type of fracture seen in the elderly population and recent work has suggested that operative intervention may provide improved outcomes. Current outcome measures do not accurately assess true mobility in the geriatric population. In this study, we utilize the Life Space Assessment (LSA), a novel medical assessment survey which focuses specifically on how a patient functions within his/her environment following a medical event. This tool has not been previously utilized in orthopedic patients. We postulated that the LSA would provide improved assessment of these patients and help identify key differences in operative and non-operatively treated patients when compared to current outcome measures.

Methods: This study was designed as a prospective observational study in which all geriatric patients age 65 and older with an ankle fracture were followed for one year from the time they presented for treatment. Treatment options of either non-operative or operative were determined by the attending physician on a patient specific basis. The patient was invited to participate in the study at the initial injury visit. The LSA was administered at the initial visit and 6 weeks, 3 months, 6 months and 12 months post injury/surgery. The SF-36 and Visual Analogue Pain Scale surveys were administered at 6 months and 12 months as a comparison. Survey scores were tallied and standard means were determined for each time point. Statistical analyses were performed to determine significance.

Results: 26 patients met inclusion criteria and 20 were enrolled. 11 underwent surgery while 9 were treated non-operatively. The surgical LSA group scored 91.4 pre-injury and improved to 87.6 after 1 year which was near baseline (Graph #1). The non-op group recorded 80.88 pre-injury and only improved to 59.5 at 1 year. For the VAS, surgical patients reported pain of 2.2 and 1.75 at 6 and 12 months. Non-op patients recorded pain of 2.25 and 2.4 at 6 and 12 months. For SF-36 physical score, surgical patients recorded 57.6 and 75.8 at 6 and 12 months while non-op patients scored 53.3 and 59.43. SF-36 mental scores for the surgical group was 60.63 and 74.83 while non-op patients recorded 76.88 and 86.5 at 6 and 12 months.

Conclusion: Operative patients returned to their baseline LSA while non-operative patients continued to have lower mobility at one year. All patients’ mobility was significantly limited for first three months. Surgical patients had less pain at 12 months compared to non-op. Surgical patients showed significant improvement in SF-36 physical scores from 6 months to 1 year while non-op patients had minimal improvement echoing our findings from LSA. The operative group had improved outcomes compared to non-op and this is reflected in both their LSA and SF-36 scores. Further investigations are needed to determine optimal treatment paradigm for geriatric ankle fracture patients.