

Correlation between Parker Mobility Score and Length of Stay in Patients with Hip Fractures

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INTRODUCTION:

Preoperative mobility is frequently measured in hip fracture patients to evaluate surgical outcomes. Preoperative mobility may impact their length of stay (LOS). The Parker Mobility Score (PMS) is a validated and reliable method of quantifying a patient's mobility. The aim of this study is to investigate the correlation between pre-operative PMS and LOS in hip fracture patients. We hypothesize that there is a correlation between pre-operative PMS and LOS in a cohort of patients with hip fractures.

METHODS:

A retrospective study was conducted on all admitted hip fracture patients who underwent surgery in a single tertiary hospital between 2020-2021. Variables collected include LOS, type of fracture, type of surgery, age, gender, and ethnicity. The effect of these variables on LOS was examined through binary logistic regression.

RESULTS:

There were 588 patients. The mean age was 80.03 ± 7.89 (range 60–103) years with a median LOS 13.60 ± 4.24 days (range 3–104) and 1-year postoperative survival rate of 92.5%. Long stayers were defined as an $LOS > 10$ days. Lower preoperative PMS was found to be a strong predictor of long stayers, and remained significant after adjusting for age, gender, ethnicity, type of surgery, and type of fracture in multivariable analysis (OR =1.16, 95% CI 1.08-1.24, $p < 0.001$). Furthermore, PMS was found to be a strong predictor of 1 year mortality in multivariable analysis (OR =1.223; 95% CI 1.082-1.383; $p < 0.001$). Data for preoperative PMS was complete.

DISCUSSIONS:

The Parker Mobility Scoring system describes functional mobility. It is frequently used in evaluating hip fracture patients to predict surgical outcomes. A lower PMS was associated with a higher chance that patients are long stayers. This could be due to poorer rehabilitation potential, increased need for post-surgery community hospital care and home modifications.

CONCLUSION:

We concluded that poorer preoperative PMS was associated with longer LOS in hip fracture patients' post-surgery. Thus, preoperative PMS should be used as an indicator to identify hip fracture patients who are at risk of being long stayers after surgery. This may improve allocation of hospital resources.