ORIGINAL ARTICLE

# Early Mobilization After Hip Fracture Surgery and 90-Day Functional Recovery: A Retrospective Cohort Study

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## Abstract

**Background:** The optimal approach to early mobilization after hip fracture surgery remains debated, and evidence from routine clinical practice is limited.
**Objective:** To compare Barthel Index at 90 days between the early mobilization group and the delayed mobilization group.
**Methods:** This study included 260 patients aged 65 years or older who underwent surgical fixation of a hip fracture treated at two fictional teaching hospitals. The primary outcome was Barthel Index at 90 days. Groups were compared using appropriate parametric and non-parametric tests.
**Results:** Barthel Index at 90 days was 78.4 ± 12.1 in the early mobilization group and 69.2 ± 15.3 in the delayed mobilization group (p <0.001). Length of stay (days) also differed between groups (8.1 ± 2.4 vs. 10.6 ± 3.2).
**Conclusion:** In this sample, early mobilization was associated with favourable results. Prospective studies are needed to confirm these findings. *(All data in this article are fictional and for template demonstration only.)*
**Keywords:** hip fracture; early mobilization; functional recovery; geriatric surgery; rehabilitation

## Introduction

Early mobilization after hip fracture surgery is a common clinical question in daily practice1,2. Variation between centres is considerable, and published series often include small numbers of patients3.

Previous reports suggest that outcomes may depend on patient selection, perioperative care and follow-up protocols4,5. The aim of this study was to compare Barthel Index at 90 days between the early mobilization group and the delayed mobilization group.

## Materials and Methods

We reviewed 260 patients aged 65 years or older who underwent surgical fixation of a hip fracture between January 2022 and December 2024. Patients were divided into two groups: early mobilization (n = 142) and delayed mobilization (n = 118). The study was approved by the institutional review board (fictional approval no. EX-2025-001).

The primary outcome was Barthel Index at 90 days. Secondary outcomes are listed in Table 1. Continuous variables are presented as mean ± standard deviation and compared with Student's t-test; categorical variables were compared with the chi-square or Fisher's exact test. A p value below 0.05 was considered significant.

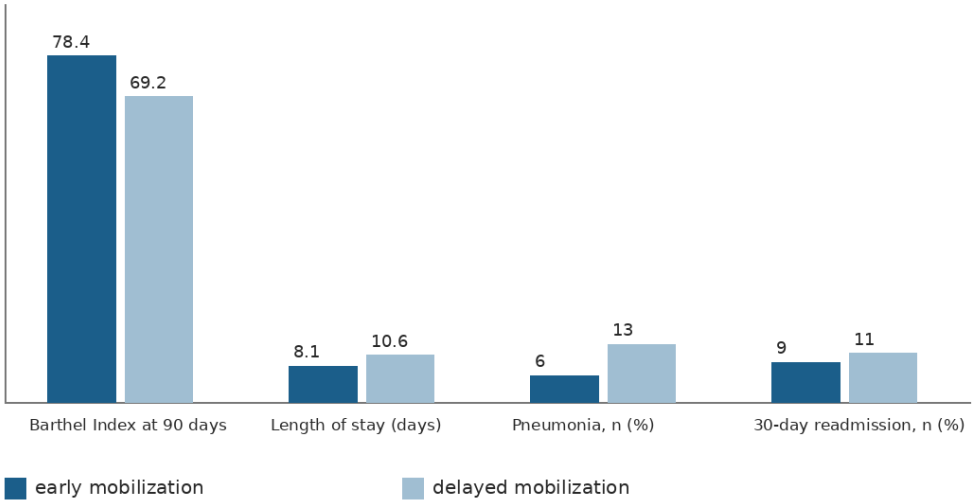
## Results

Baseline characteristics were comparable between groups. Barthel Index at 90 days was 78.4 ± 12.1 in the early mobilization group and 69.2 ± 15.3 in the delayed mobilization group (p <0.001; Table 1, Figure 1).

**Table 1.** Outcomes by group

**Figure 1**

Fictional data




## Discussion

In this cohort, the early mobilization group showed better results for several outcomes. These findings are in line with earlier reports5,6, although differences in definitions make direct comparison difficult7.

This study has limitations. It was retrospective, performed at two centres, and unmeasured confounders may have influenced the results. Larger prospective studies are warranted.

## Conclusion

Early mobilization was associated with improved Barthel Index at 90 days in this fictional sample. The approach appears safe and may be considered in routine practice8.

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