ORIGINAL ARTICLE

Ultrasound-Guided Regional Anesthesia Versus General Anesthesia for Distal Radius Fracture Fixation

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Abstract

Background: The optimal approach to anesthetic technique for distal radius fracture fixation remains debated, and evidence from routine clinical practice is limited.
Objective: To compare time to discharge between the regional anesthesia group and the general anesthesia group.
Methods: This study included 147 adults undergoing volar plate fixation of a distal radius fracture treated at two fictional teaching hospitals. The primary outcome was time to discharge. Groups were compared using appropriate parametric and non-parametric tests.
Results: Time to discharge (h) was 4.2 ± 1.3 in the regional anesthesia group and 6.8 ± 2.0 in the general anesthesia group (p <0.001). Opioid use in 24 h (MME) also differed between groups (6.5 ± 5.0 vs. 18.9 ± 9.4).
Conclusion: In this sample, regional anesthesia 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: regional anesthesia; distal radius fracture; ultrasound; recovery; day surgery

Introduction

Anesthetic technique for distal radius fracture fixation 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 time to discharge between the regional anesthesia group and the general anesthesia group.

Materials and Methods

We reviewed 147 adults undergoing volar plate fixation of a distal radius fracture between January 2022 and December 2024. Patients were divided into two groups: regional anesthesia (n = 76) and general anesthesia (n = 71). The study was approved by the institutional review board (fictional approval no. EX-2025-001).

The primary outcome was time to discharge. 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.

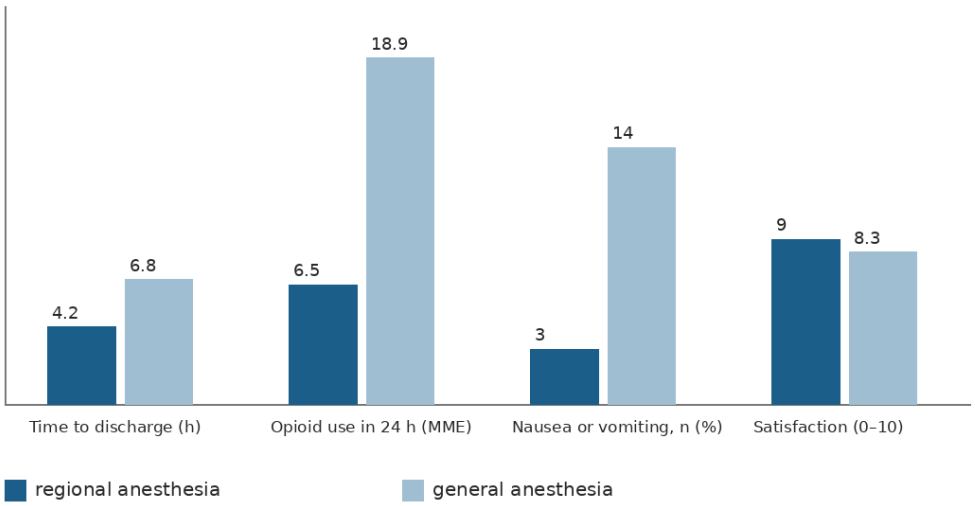
Results

Baseline characteristics were comparable between groups. Time to discharge (h) was 4.2 ± 1.3 in the regional anesthesia group and 6.8 ± 2.0 in the general anesthesia group (p <0.001; Table 1, Figure 1).

Table 1. Outcomes by group

Figure 1

Fictional data



Discussion

In this cohort, the regional anesthesia 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

Regional anesthesia was associated with improved time to discharge in this fictional sample. The approach appears safe and may be considered in routine practice8.

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