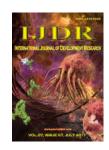


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# **ORIGINAL RESEARCH ARTICLE**

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# THE OUTCOMES AFTER THE USE OF BIER'S BLOCK FOR THE MANIPULATION OF DISTAL RADIUS FRACTURES IN THE EMERGENCY DEPARTMENT

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Bier's block, Distal Radius, Fractures.

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# **ABSTRACT**

**Purpose:** Our aim was to identify what proportion of patients can achieve a satisfactory reduction with Bier's block that can be treated non-operatively.

**Methods:** All patients who received a Bier's block in Emergency department in 2015 were identified using electronic patient databases.

**Results:** 92% or 60 out of 65 patients had radiological improvement in their fracture position post-manipulation, 2 out of 5 patients had radiological improvement in fracture position continued to be managed non-operatively. 12 out of 65 patients receiving Bier's block manipulation went on to need surgery.

**Conclusion:** Bier's blocks are very effective at allowing good fracture reduction in the Emergency Department and the majority of these patients go on to be managed non-operatiely

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# INTRODUCTION

Options for reduction of distal radius fractures in the Emergency Department include haematoma block or Bier's

## Published Literature shows that Bier's block:

- Provides better anesthesia, with lower reported pain scores (Cobb, 1985; Abbaszadegan, 1990; Kendall et al., 1997).
- Improved position of the distal fracture fragment when compared to haematoma block (Abbaszadegan, 1990; Wardrope, 1985).

• It can be perceived as being more time and resource consuming.

# **Objectives**

Our aim was to identify what proportion of patients can achieve a satisfactory reduction with Bier's block that can be treated non-operatively.

# **MATERIALS AND METHODS**

All patients who received a Bier's block in Emergency department in 2015 were identified using electronic patient databases.

## RESULTS

- 92% or 60 out of 65 patients had radiological improvement in their fracture position post-manipulation.
- 2 out of 5 patients had radiological improvement in fracture position continued to be managed nonoperatively.
- 12 out of 65 patients receiving Bier's block manipulation went on to need surgery.
- 2 out of these 12 had inadequate reduction, 3 had significant comminution, 4 had late fracture displacement and 3 were for other reasons.

## Conclusion

Bier's blocks are very effective at allowing good fracture reduction in the Emergency Department and the majority of these patients go on to be managed non-operatiely. This ultimately results in a better use of resources within the NHS by preventing the need for hospital admission for operative management. Their use should be continued and encouraged.

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