# VIRTUAL FRACTURE CLINIC MANAGEMENT OF ADULT CLAVICLE FRACTURES:

A RETROSPECTIVE OBSERVATIONAL STUDY WITH IMPLICATIONS FOR DIRECT DISCHARGE PROTOCOLS

### **AUTHORS**

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#### **BACKGROUND**

- •Clavicle fractures are common, representing up to 10% of all fractures.
- •Evidence regarding the safety of virtual fracture clinic (VFC) discharge, particularly for adult clavicle fractures, remains limited.

#### **METHODOLOGY**

- A retrospective review was conducted of all adult patients (≥16 years) referred to the VFC at with a clavicle fracture January 2022 December 2023.
- Fractures were classified using the Robinson system.
- Data on discharge status, re-presentations and need for surgical intervention were analysed.

## **AFFILIATIONS**

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## **OBJECTIVES**

- •Primary: to evaluate the outcomes of adult patients (16+) with clavicle fractures managed through a VFC.
- •Secondary: to assess whether specific fracture patterns are suitable for direct discharge (DD) without routine follow-up.

# **ROBINSON'S CLASSFICATION**



- •Developed in 1988
- •Fractures are classified into 12 types based on radiological review depending on anatomical location, extent of comminution and articular extension.

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## **RESULTS**

- A total of 312 patients were included of 358 identified via an existing database (mean age 50.8 years; 202 male, 64.7%).
- 177 (56.7%) displaced (type B) and 135 (43.3%) undisplaced (type A).
- 22 (7.1%) medial, 148 (47.4%) midshaft and 142 (45.5%) lateral; the most common were 3A1 (n=69) and 2B1 (n=62).
- 170 patients (54%) were discharged; the least likely to be discharged were 2B1 (22.6%), 2B2 (16.7%) and 3B1 (34%)
- Of those discharged, 26 (15.3%) re-presented to most commonly due to pain (n=11) or reinjury (n=5).
- In total there were 34 patients (10.9%) requiring surgical intervention; 3 were originally discharged.
- O patients with undisplaced midshaft fractures and 1 patient (1.4%) with an undisplaced lateral fracture required surgery.
- Patterns most likely to require surgical intervention were displaced midshaft (24.2%) and displaced lateral (13.2%).

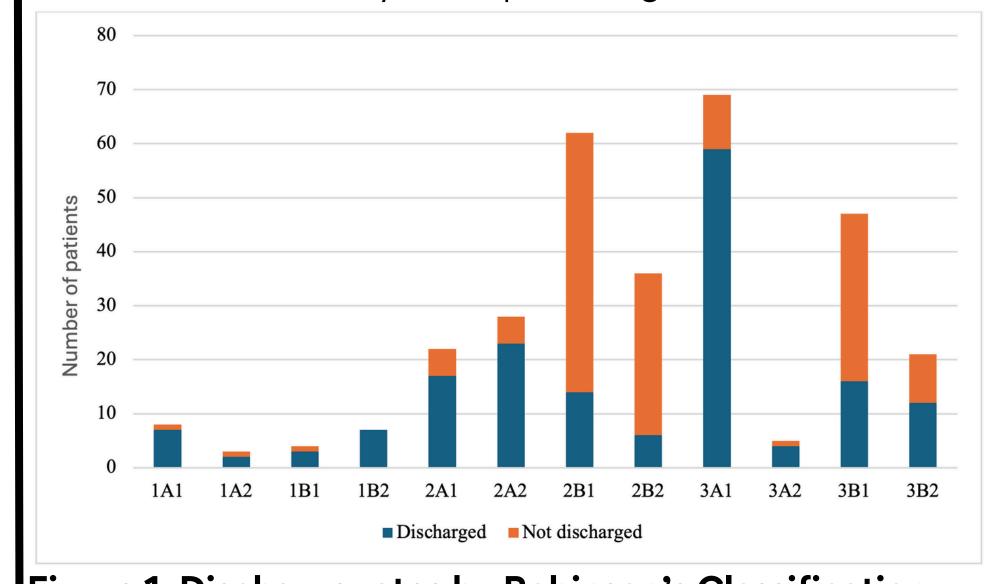


Figure 1. Discharge rates by Robinson's Classification

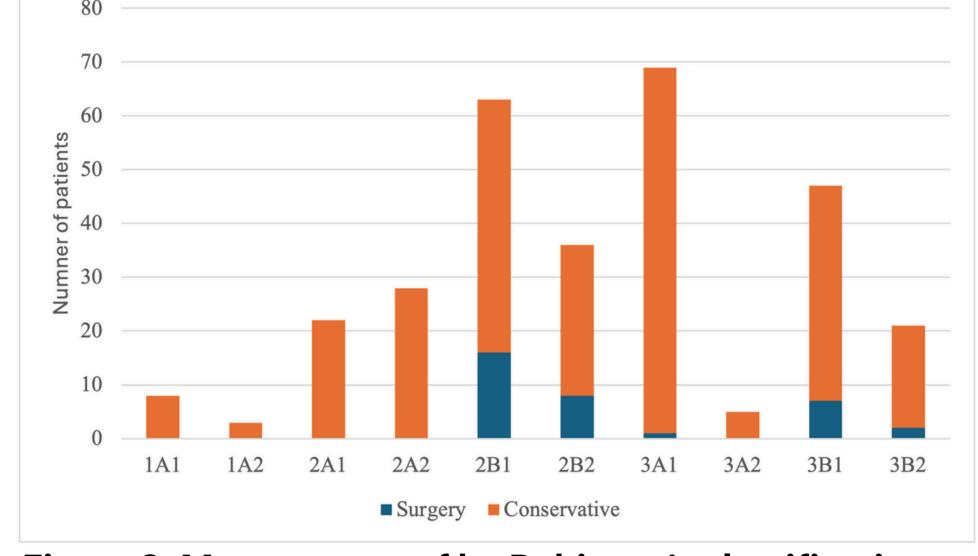


Figure 2. Management of by Robinson's classification

## LIMITATIONS

Retrospective design and reliance on database accuracy.

Functional outcomes not assessed.

## **FUTURE WORK**

Evaluate PROMs, cost-effectiveness and longer-term functional recovery to further validate conclusions

#### CONCLUSION

The VFC is a safe and efficient model for managing clavicle fractures. Undisplaced midshaft and undisplaced lateral fracture patterns demonstrated excellent outcomes with conservative care and could be considered for DD, supporting streamlined pathways without compromising safety.

## REFERENCES

Robinson C. Fractures of the clavicle in the adult. Journal of Bone and Joint Surgery British Volume. 1998;80-B(3):476-84. Geerdink TH, Verbist J, van Dongen JM, Haverlag R, van Veen RN, Goslings JC. Direct discharge of patients with simple stable musculoskeletal injuries as an alternative to routine follow-up: a systematic review of the current literature. Eur J Trauma Emerg Surg. 2022;48(4):2589-605.