

Surgical vs conservative treatment for midshaft clavicle fractures, A retrospective study

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INTRODUCTION

Clavicle fractures are frequent (5-10% of all fractures) with midshaft fractures being the most common, accounting for up to 80% of all clavicle fractures. The best treatment option is still debated. Aim of this study was to evaluate the rate of scapular dyskinesia, clinical, functional, and radiological outcomes in patients treated surgically or conservatively for midshaft clavicle fractures.

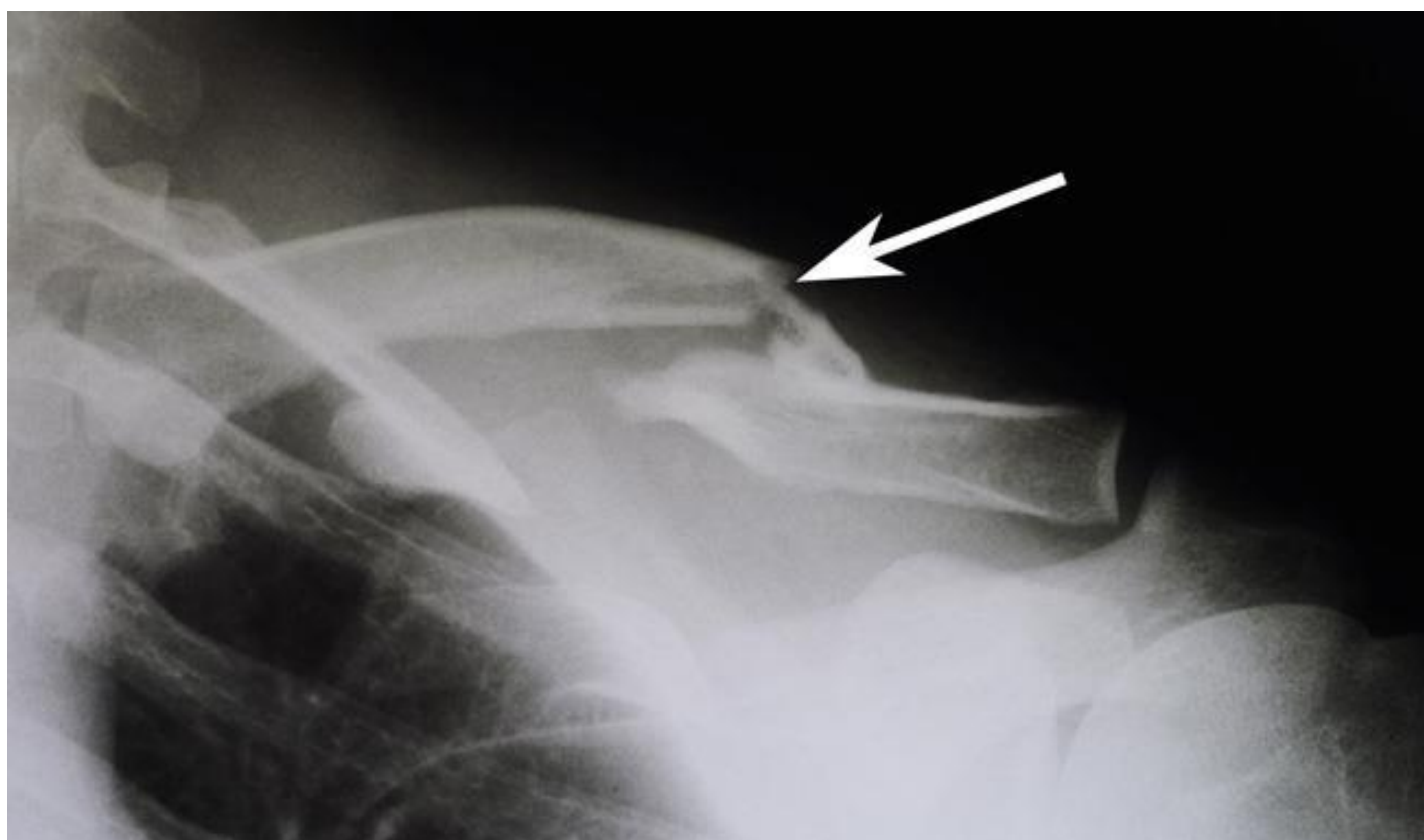
AIM

Primary:

- Functional post-operative score (DASH, Constant score)

Secondary

- scapular dyskinesia
- patients' satisfaction (functional, aesthetic, treatment)
- radiological outcomes



METHOD

This retrospective monocentric study included midshaft clavicle fracture patients (AO 15. A) treated operatively or conservatively from 2009 to 2022. Outcomes evaluated were scapular dyskinesia, Constant score, Disabilities of Arm, Shoulder, and Hand (DASH) score, radiological outcomes (nonunion and malunion rates), aesthetic and general satisfaction.

INCLUSION CRITERIA

- Displaced midshaft clavicle fracture between January 2010 to April 2021
- Age >18 at the time of trauma
- Surgical or conservative treatment

EXCLUSION CRITERIA

- Medial third or lateral third clavicle fractures
- Open fractures with neuro-vascular injuries
- Intramedullary nailing
- Follow-up in other institution
- Age <18 at the time of trauma
- Inability to follow study procedures

RESULTS

123 patients were included, 68 (55%) in the surgical group and 55 (45%) in the conservative group. Mean follow-up time was 8 ± 2 years.

Primary Outcome	Group	Results	Statistical Analysis
Constant Score	Conservative	88.5 ± 16.8	p<0.05
	Surgical	94.1 ± 10.6	
DASH	Conservative	6.7 ± 13.1	p>0.05
	Surgical	5.1 ± 11.3	

Secondary Outcome	Group	Results	Statistical Analysis
General Satisfaction	Conservative	7.0 ± 2.3	p>0.05
	Surgical	8.9 ± 1.7	
Repeat Treatment	Conservative	43/55	p<0.05
	Surgical	63/68	
Aesthetic Satisfaction	Conservative	8.2 ± 1.8	p>0.05
	Surgical	8.2 ± 2.1	
Scapular Dyskinesia	Conservative	30/55	p<0.05
	Surgical	13/68	
Nonunion	Conservative	14/55	p<0.05
	Surgical	1/68	
Malunion	Conservative	17/55	p<0.05
	Surgical	3/68	

CONCLUSIONS

Surgical intervention leads to better clinical and radiological outcomes than conservative treatment, reducing the risk of developing scapular dyskinesia, nonunion, and malunion. However, this better clinical outcome does not correlate with greater treatment satisfaction results than the conservative group, as well as at the level of cosmetic results.

