NON-OPERATIVE TREATMENT FOR CLAVICLE FRACTURES

THE ONLY WAY TO GO.....

1985

The Operative Treatment of Mid-Shaft Clavicular Non-Unions

BY DAVID J. JENSEN, M.D., AND ROBERT M. SCADD, M.D., SACRAMENTO, CALIFORNIA

1987

Non-Unions of the Clavicle

ASSOCIATED COMPLICATIONS AND SURGICAL MANAGEMENT

BY JUDE B. UPTON, M.D., AND ROBERT B. LEPPOET, M.D., BOSTON, MASSACHUSETTS

From the Upper Extremity Rehabilitation and Fracture Service, Department of Orthopaedic Surgery, Massachusetts General Hospital and Harvard Medical School, Boston

1/200 CASES DEVELOP A SYMPTOMATIC NONUNION REQUIRING ORIF = 0.5%

Skeletal Trauma 2nd Edition
Late complications following clavicular fractures and their operative management

C.K. Kitis*, A.J. Marino*, S.J. Krikelas*, R. Birch*

* Orthopaedic Department of Coventry, Warwickshire Hospital, Sheep Street Road, Coventry CV1 4PE, UK
* Royal National Orthopaedic Hospital, Taplow Hill, Stanmore HA7 4LP, UK

2002

17 PATIENTS
14% VERY SATISFIED
50% SATISFIED
14 UNSATISFIED
22% VERY UNSATISFIED

ARMAGEDDON

Nonoperative Treatment Compared with Plate Fixation of Displaced Midshaft Clavicular Fractures
A Multicenter, Randomized Clinical Trial

This study supports primary plate fixation of completely displaced midshaft clavicular fractures in active adult patients

2007
ONE OLD TIMER REMEMBERED:
“it was off to the races. At that time everyone was infected with the virus known as *operative fever*”
T. DiPasquale, 2008

Clavicular Anatomy and the Applicability of Precontoured Plates

By Jerry S. Haung, MD, Paul Bergood, BS, Michael K. Cho, MD, John M. Wilbar, MD, and David R. Cooperman, MD

*Surgeons perforated the technique of precontouring. University Hospitals Case Medical Center.
Clavicular Anatomy and the Applicability of Precontoured Plates

THE JOURNAL OF BONE & JOINT SURGERY
Volume 89-A, Number 10 - October 2007

SUPERIOR PLATE
DANGEROUS SCREW PLACEMENT
**Operative Versus Nonoperative Care of Displaced Midshaft Clavicular Fractures: A Meta-Analysis of Randomized Clinical Trials**

<table>
<thead>
<tr>
<th>Year</th>
<th>6 STUDIES</th>
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<td>2012</td>
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<tr>
<th>ISSUE</th>
<th>ORIF (212)</th>
<th>NON-OP (200)</th>
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<tr>
<td>N-U</td>
<td>1.4% (3)</td>
<td>14.5% (29)</td>
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<tr>
<td>MAL</td>
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<td>8.5% (17)</td>
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Little evidence to show that the long term functional outcome of ORIF is significantly superior to non-op care.
Open Reduction and Plate Fixation Versus Nonoperative Treatment for Displaced Midshaft Clavicular Fractures

A Multicenter, Randomized, Controlled Trial

ROBINSON et al, Edinburgh, Scotland 2013

- MORE PLATE REMOVALS
- MORE EXPENSIVE
- NO DIFFERENCE IN CONSTANT OR DASH SCORES AT ANY TIME


THE RESULTS OF THE STUDY DO NOT SUPPORT ROUTINE PRIMARY ORIF FOR DISPLACED MIDSHAFT CLAVICLE FRACTURE

Operative versus nonoperative treatment of displaced midshaft clavicle fractures in adults: a systematic review

Conclusions: It seems like operative intervention leads to fewer nonunions at the cost of an increase in minor complications compared to nonoperative treatment. However, the effects of operation on functional outcome remains controversial. High quality evidence is currently sparse supporting either operative or nonoperative treatment on displaced midshaft clavicle fractures in adults.
Better scores at 6 weeks. At 24 weeks and 5 years there was no functional difference.

Is There a Deficit After Nonoperative Versus Operative Treatment of Shortened Midshaft Clavicular Fractures in Adolescents?
Parry et al, JPO 2015

Shortened midshaft clavicular fractures had excellent outcomes after both operative and nonoperative treatments. No subjective or objective differences were observed between treatment groups.

THE PENDULUM IS SWINGING BACK TO NORMAL (took ~ 10 years)
Dear Mike,

TRIAL & ERROR

IS GOOD!

BEING WRONG
Adventures in the Margin of Error
KATHRYN SCHULZ

Dear Mike,