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Arthroscopically Assisted Double-Loop Suture Repair For Acute Acromioclavicular Joint Disruption

Emmanouil M. Fandridis, Frantzeska Zampeli, Panagiotis Dimakopoulos

Hand-Upper Limb-Microsurgery Department, General Hospital “KAT”, ATHENS, Attiki, GREECE

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No Disclosures

Background

- Arthroscopically assisted or all-endoscopic techniques for operative treatment of acute high-grade acromioclavicular (AC) joint (ACJ) injuries offer certain advantages

- **Goals** of these techniques

✓ Anatomic reduction of the ACJ

✓ Primary healing of AC and coracoclavicular (CC) ligaments

✓ Minimize associated complications

Background

- **Double-loop suture repair technique**
  (Dimakopoulos et al at 2006)

✓Implant-free technique for acute ACJ disruption
✓Open procedure
✓Effective and low-cost treatment
✓Proved long-term outcomes and stability

- **Arthroscopically assisted double-loop suture repair**

Recently described (**Fandridis et al 2022**)

Double-Loop Suture Repair for Acute Acromioclavicular Joint Disruption

Panayotis Dimakopoulos, MD, Andreas Panagopoulos,* MD, PhD, Spyros A. Syggelos, MD, Elias Panagiotopoulos, MD, and Elias Lambiris, MD
From the Orthopaedic Clinic, Shoulder and Elbow Surgery Unit, University Hospital of Patras, Patras, Greece

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Technical Note

Arthroscopically Assisted Double-Loop Suture Repair for Acute Acromioclavicular Joint Disruption

Emmanouil M. Fandridis, M.D., Ph.D., Frantzeska Zampeli, M.D., Ph.D., and Panagiotis Dimakopoulos, M.D., Ph.D.

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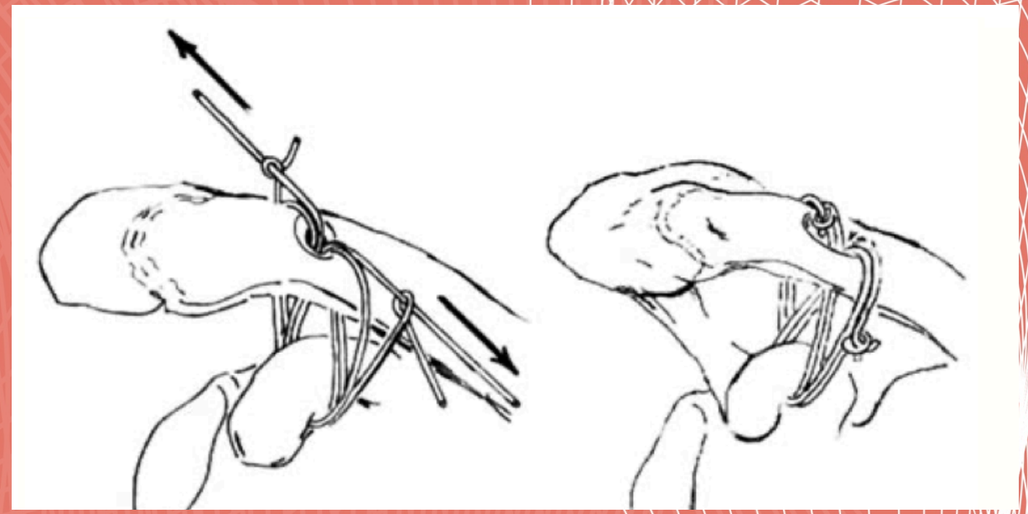
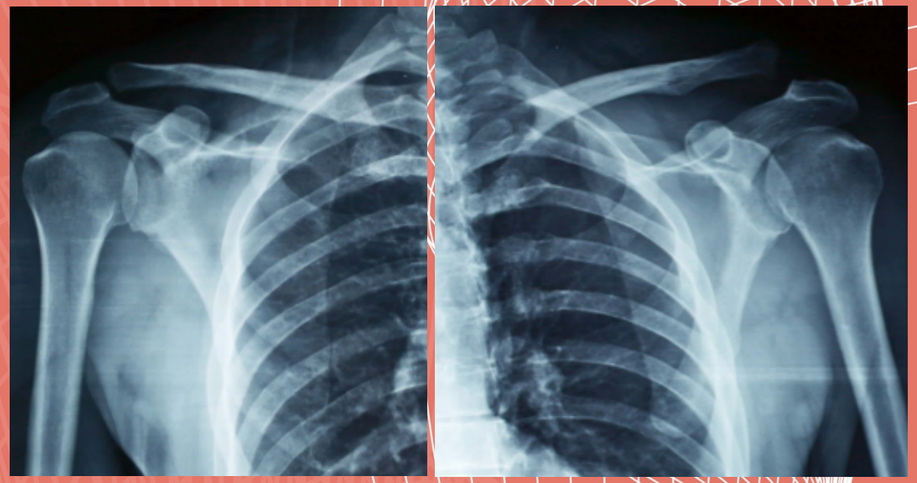
Objective

To evaluate the clinical and radiological outcomes of double-loop suture repair for acute ACJ separation using the arthroscopically assisted technique



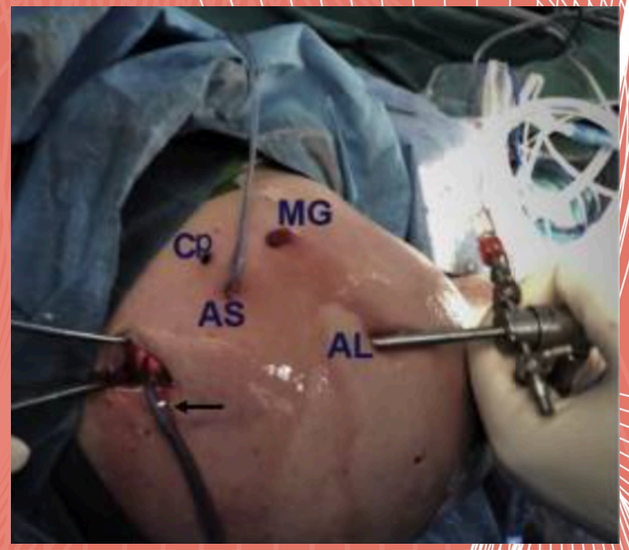
Methods

- 4 male patients
- 2/4 type IIIb, 2/4 type V (Rockwood, modified by ISAKOS)
- Median age 23 years (range 18-27)



Arthroscopically assisted double-loop suture repair CC fixation

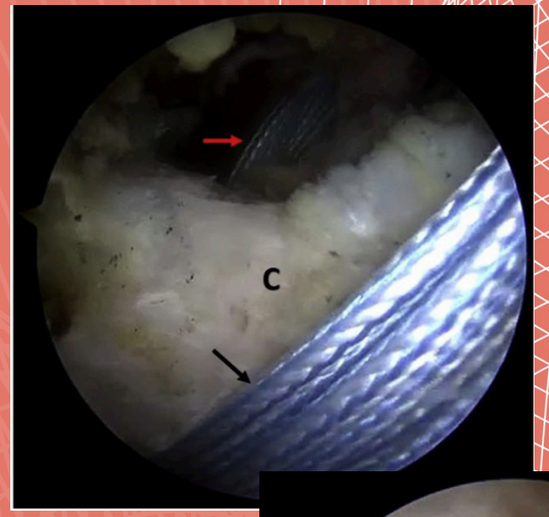
- January 2019 - December 2020
- A single surgeon
- Operated within the first 15 days after the initial injury

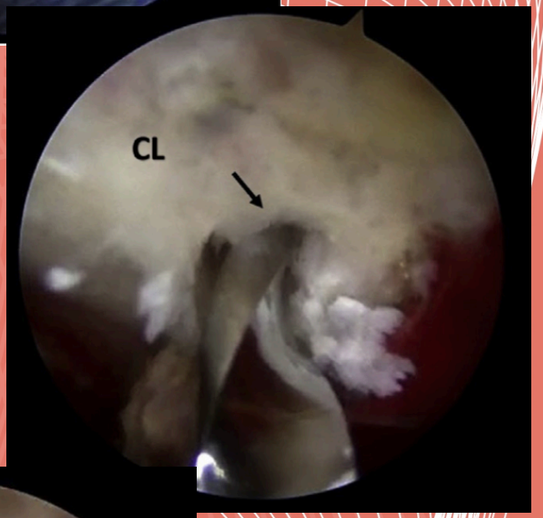


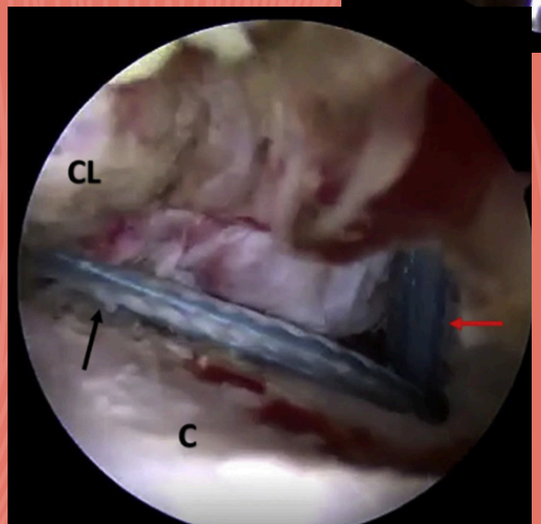
Methods

- Glenohumeral and subacromial space arthroscopically inspected for any concomitant lesions

- Repair with double-looped CC fixation with 4 Ethibond sutures
  - passing underneath the coracoid
  - and through 4.5 mm drill hole in the clavicle
    - ✓ at the middle of its anteroposterior width
    - ✓ at 2.5-3-cm distance from the ACJ line
  - in opposing directions to control both anteroposterior and vertical clavicle displacement







Methods

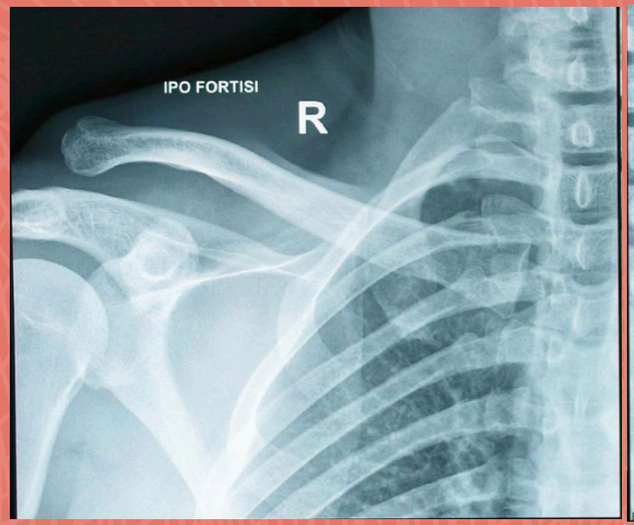
Outcome measures

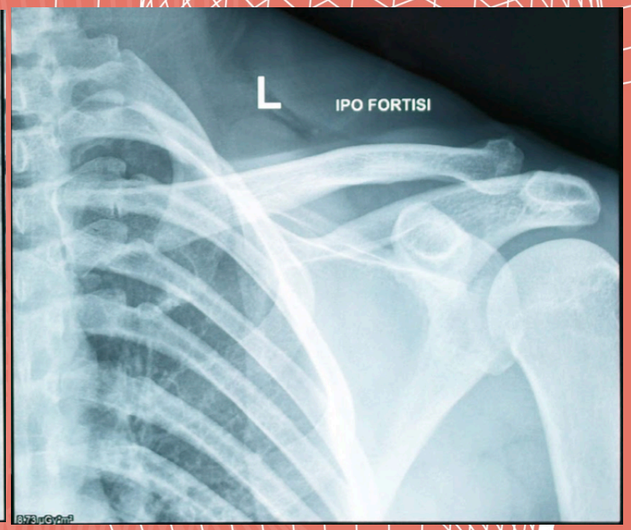
- Constant-Murley score (CMS)
- VAS for pain
- Acromio-Clavicular Joint Instability Score (ACJIS)

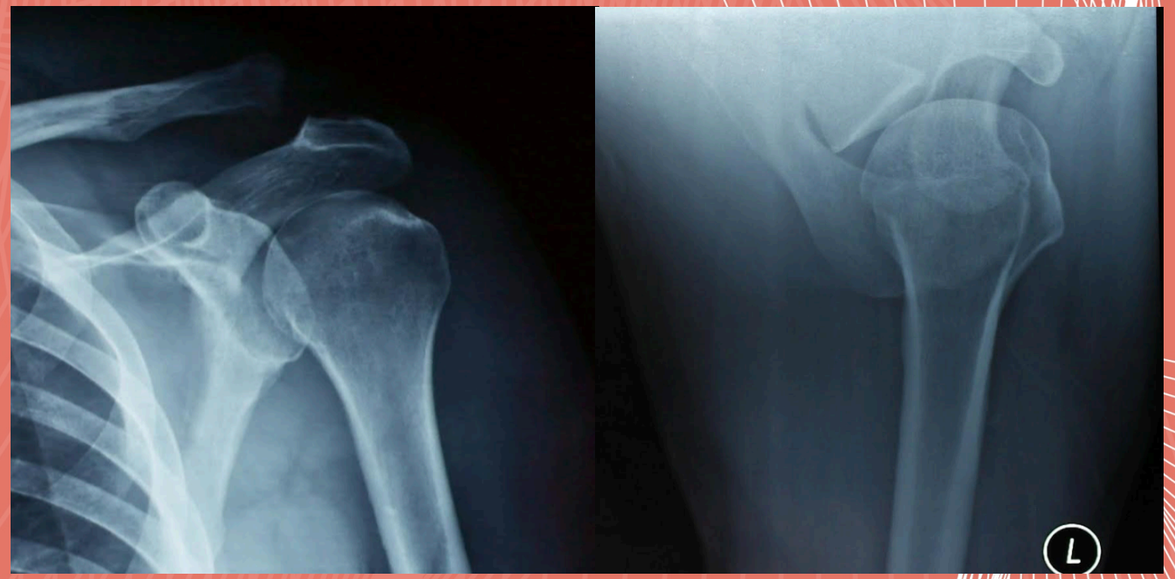
X-rays preoperatively and at the last follow-up

- Comparative anteroposterior of both ACJ
- Axillary or Alexander views
- Loss of reduction at final follow-up

- Complications (intraoperative or postoperative)





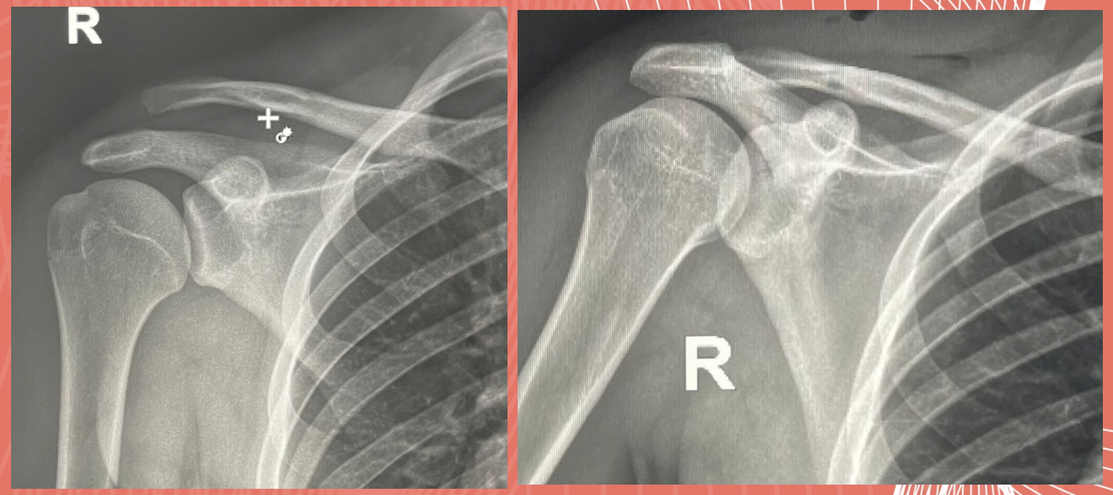


Results

- Median follow-up 23 months (range 19-28)
- Concomitant lesions
  - ✦SLAP I debridement, 1 patient
  - ✦Subacromial decompression, 1 patient
- No intraoperative or postoperative complications
- Slight loss of reduction in superior direction (n=1)
  - ➡No clinical deterioration
- Median operative time for the procedure
  75 min (range, 65-100)

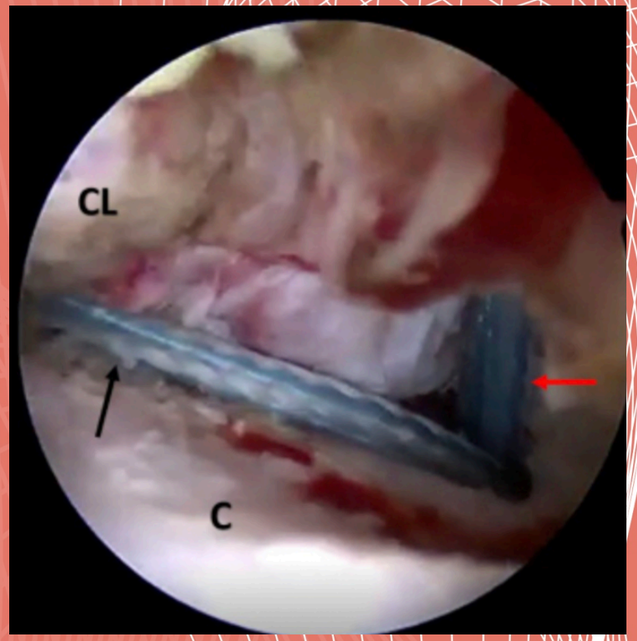
Results in Median (range)

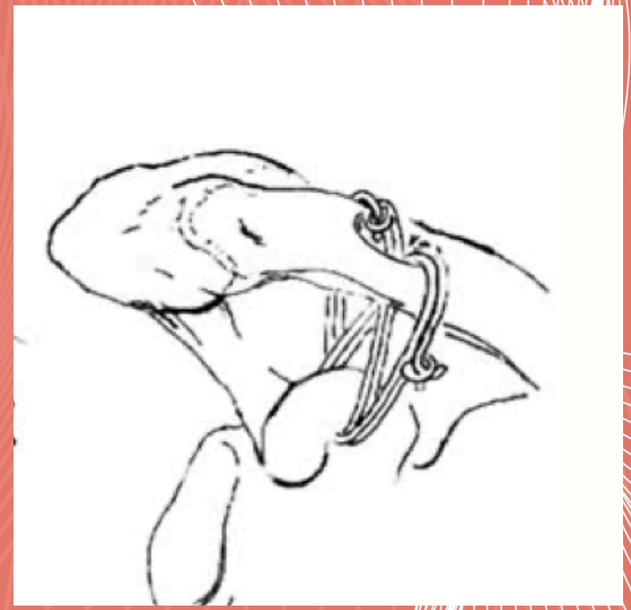
	pre op	post op
Constant score	67 (30-89)	86 (66-100)
ACJIS	55 (40-65)	80 (75-95)
VAS pain	8 (6-9)	1 (0-1) everyday life 2 (0-3) athletic activities



Conclusions

- At the short-term follow-up arthroscopically assisted double-loop suture repair for acute ACJ disruption leads to successful outcome
- Although this is a small case series, it is the first to report the results of the arthroscopically assisted double-loop suture repair technique
- Arthroscopy offers additional advantage of diagnosing and treating concomitant lesions





References

Dimakopoulos P, Panagopoulos A, Syggelos SA, Panagiotopoulos E, Lambiris E. Double-loop suture repair for acute acromioclavicular joint disruption. Am J Sports Med. 2006 Jul;34(7):1112-9. doi: 10.1177/0363546505284187. Epub 2006 Feb 13. PMID: 16476916

Panagopoulos A, Fandridis E, Rose GD, Ranieri R, Castagna A, Kokkalis ZT, Dimakopoulos P. Long-term stability of coracoclavicular suture fixation for acute acromioclavicular joint separation. Knee Surg Sports Traumatol Arthrosc. 2021 Jul;29(7):2103-2109. doi: 10.1007/s00167-020-06158-3. Epub 2020 Jul 20. PMID: 32691091

Fandridis EM, Zampeli F, Dimakopoulos P. Arthroscopically Assisted Double-Loop Suture Repair for Acute Acromioclavicular Joint Disruption. Arthrosc Tech. 2022 Apr 25;11(5):e937-e946. doi: 10.1016/j.eats.2022.01.013. PMID: 35646578; PMCID: PMC9134684.1

Beitzel K, Mazzocca AD, Bak K, Itoi E, Kibler WB, Mirzayan R, Imhoff AB, Calvo E, Arce G, Shea K; Upper Extremity Committee of ISAKOS. ISAKOS upper extremity committee consensus statement on the need for diversification of the Rockwood classification for acromioclavicular joint injuries. Arthroscopy. 2014 Feb;30(2):271-8. doi: 10.1016/j.arthro.2013.11.005. PMID: 24485119

Scheibel M, Dröschel S, Gerhardt C, Kraus N. Arthroscopically assisted stabilization of acute high-grade acromioclavicular joint separations. Am J Sports Med. 2011 Jul;39(7):1507-16. doi: 10.1177/0363546511399379. Epub 2011 Mar 24. PMID: 21436458

Ruiz Ibán MA, Moreno Romero MS, Diaz Heredia J, Ruiz Díaz R, Muriel A, López-Alcalde J. The prevalence of intraarticular associated lesions after acute acromioclavicular joint injuries is 20%. A systematic review and meta-analysis. Knee Surg Sports Traumatol Arthrosc. 2021 Jul;29(7):2024-2038. doi: 10.1007/s00167-020-05917-6. Epub 2020 Mar 16. PMID: 32179968

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THANK YOU

CONTACT US

fandridis@hotmail.com

fzampeli@gmail.com