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Title: A Comparison of Anterior Capsular Release and 360° Capsular Release in the Treatment of Adhesive Capsulitis

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Introduction

- Adhesive capsulitis (AC) is characterized by progressive loss of active and passive motion of the shoulder, leading to stiffness and pain^{1,2}
- Conservative interventions used to address AC include intra-articular corticosteroid injections, oral steroids, nonsteroidal anti-inflammatory drugs (NSAIDs), physiotherapy focused on range of motion (ROM) and stretching exercises. When these treatments fail, surgical management is considered
- Anterior structures are often released arthroscopically; however, there is mixed evidence on the utility of an extended, 360° release³



Objective

To evaluate the available literature to determine if there is any benefit to 360° capsular release over anterior capsular release with respect to range of motion, functional outcomes as well as risk of complications



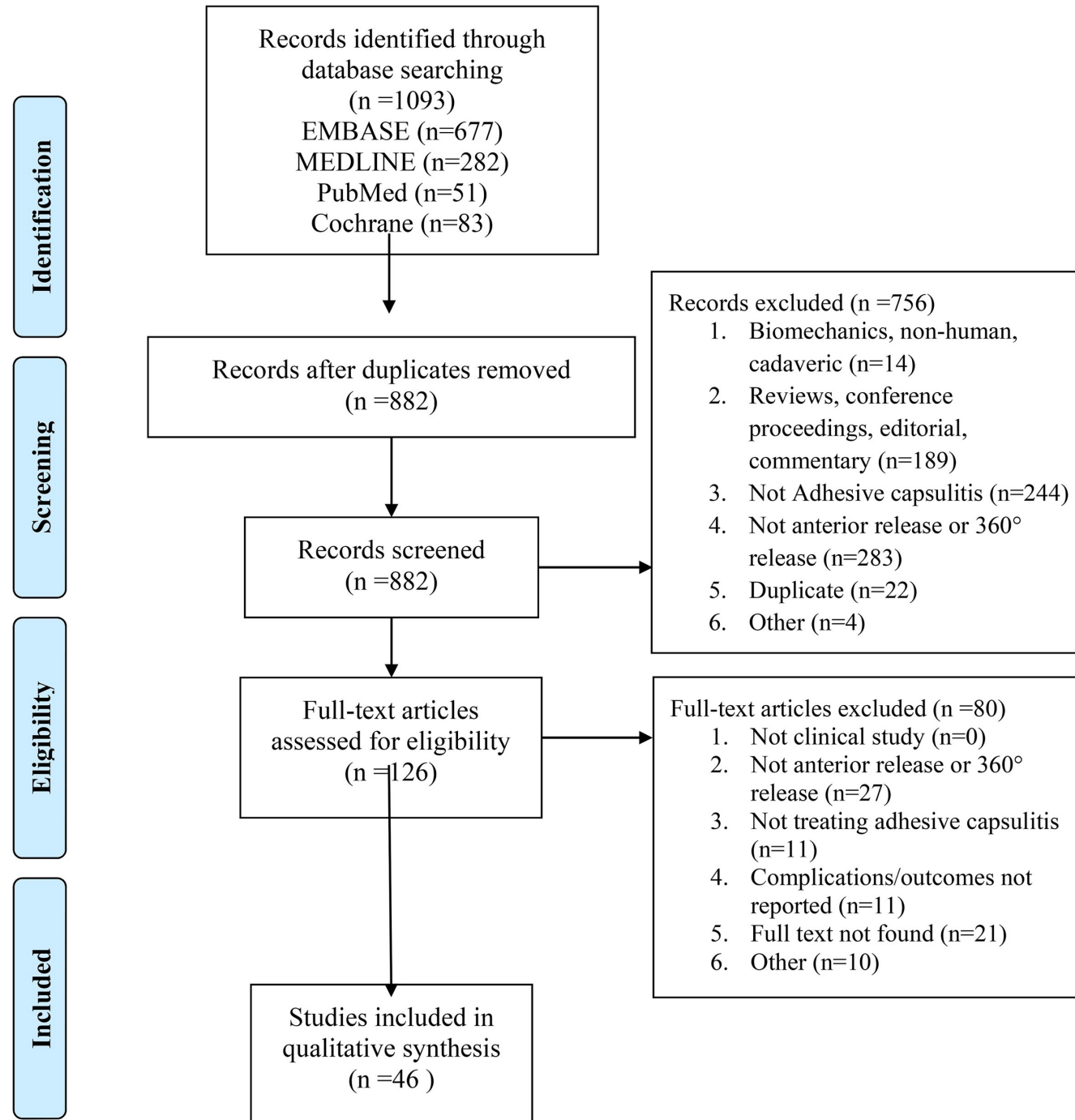
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Methods

PRISMA



Results

Patient Demographics

Patient Characteristics	Total	Anterior Release	360° Release
Shoulders	2261	451 (19.95%)	1810 (80.05%)
Males	836 (36.67%)	152 (18.18%)	653 (78.11%)
Age	54.0 ± 5.0	52.5 ± 6.1	54.2 ± 4.3
Lost to Follow Up	144 (5.88%)	31 (1.36%)	103 (4.52%)
Follow up (months)	29.3 ± 19.0	32.3 ± 23.0	30.9 ± 17.7



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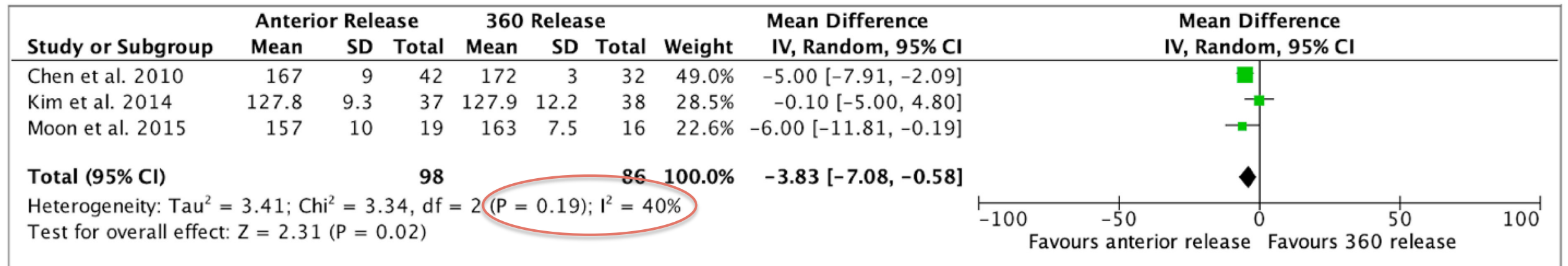
Results

- Concomitant Manipulation Under Anesthesia (MUA) employed for 70% of patient undergoing anterior release and 60% of patients undergoing 360° release
- Complication rate was 0.67% in the anterior group and 0.44% in the 360° release group with an overall rate of 0.84%
- Significant postoperative improvements ($p < 0.05$) were seen in both groups of patients, particularly in postoperative VAS, Constant scores, forward flexion, abduction, internal rotation and external rotation
- Forward elevation and UCLA scores were found to be significantly improved for patients who underwent 360° release
- Pooled analysis of studies directly comparing anterior capsular release with 360° release yielded no significant differences between the two surgical techniques at all postoperative time periods



Results

Forward Flexion 3 months



Pooled outcomes reveal improved ROM for patients undergoing anterior release compared to 360° release ($P=0.02$, $I^2=40\%$)

Results

Pooled Range of Motion Measures

ROM Measure	Release Type	Pre-operative Mean (SD)	Mean at Final Follow-up (SD)
Forward Flexion	Anterior	89.7 (11.4)	163.8 (8.8)
	360°	85.8 (19.4)	157.0 (15.2)
Abduction	Anterior	78.4 (30.4)	155.1 (12.4)
	360°	63.4 (15.4)	151.2 (13.3)
Internal Rotation	Anterior	11.7 (6.1)	47.3 (23.5)
	360°	21.3 (11.7)	57.4 (8.4)
External Rotation	Anterior	13.3 (3.9)	53.3 (10.9)
	360°	16.7 (8.5)	59.7 (13.0)
Forward Elevation	360°	91.9 (12.9)	156.7 (6.3)



Conclusion

- Anterior capsular release and 360° capsular release both result in significant improvements for patients with adhesive capsulitis with respect to ROM and functional outcomes
- Both the anterior and 360° release procedures have low complication rates
- Future studies should identify the optimal surgical management of adhesive capsulitis based on patient history/clinical presentation



References

1. Gordon JA, Breitbart E, Austin DC, Photopoulos CD, Kelly JD (2016) Adhesive Capsulitis: Diagnosis, Etiology, and Treatment Strategies BT - Elite Techniques in Shoulder Arthroscopy: New Frontiers in Shoulder Preservation. In Kelly IV JD (ed), pp149–168
2. Neviaser JS (1945) ADHESIVE CAPSULITIS OF THE SHOULDER: A Study of the Pathological Findings in Periarthritis of the Shoulder. JBJS 27
3. Moon NH, Lee S-J, Shin WC, Lee S, Suh K (2015) Is Pancapsular Release More Effective than Selective Capsular Release for the Treatment of Adhesive Capsulitis? Clin Shoulder Elb 18:28–35

