



PEER-REVIEW REPORT

Name of journal: *World Journal of Orthopedics*

Manuscript NO: 67421

Title: The role of biomechanical assessment in rotator cuff tear repair: Arthroscopic versus Mini-open approach

Provenance and peer review: Invited manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 04023880

Position: Peer Reviewer

Academic degree: MD, PhD

Professional title: Doctor, Senior Lecturer

Reviewer's Country/Territory: Poland

Author's Country/Territory: Italy

Manuscript submission date: 2021-04-23

Reviewer chosen by: AI Technique

Reviewer accepted review: 2021-04-24 19:34

Reviewer performed review: 2021-05-02 10:55

Review time: 7 Days and 15 Hours

Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
Conclusion	<input type="checkbox"/> Accept (High priority) <input type="checkbox"/> Accept (General priority) <input type="checkbox"/> Minor revision <input checked="" type="checkbox"/> Major revision <input type="checkbox"/> Rejection
Re-review	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No



Peer-reviewer statements	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous Conflicts-of-Interest: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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SPECIFIC COMMENTS TO AUTHORS

Dear Editor, Thank you very much for allowing me to be a Reviewer of the original paper entitled: „Arthroscopic versus mini-open approach in rotator cuff tear repair: a novel biomechanical study” The problems investigated in the paper are actual. The paper reads well, however, some improvements are necessary. Major revision is required due to extremely modest Discussion section. Title: maybe You should modify it and accent the role of Laboratory of Functional Movement Abstract 1. “Rotator cuff tears are a common shoulder injury often asymptomatic.” It should be deleted. If asymptomatic why treat them? It is obvious that in population in the age after 40-50 y. the RCTs are commonly encountered because of the tendinous tissue degeneration, but maybe paste something like this: „Rotator cuff (RC) tears are one of the most frequent pathologies within the shoulder girdle. Hand dominance and older age are associated with RC tears” 2. Abbreviations across the Abstract should be updated precisely. Introduction: well written Please, add some information about the complexity of the shoulder injuries and RC lesions. “Zabrzyński J, Huri G, Gagat M, et al. The Impact of Smoking on Clinical Results Following the Rotator Cuff and Biceps Tendon Complex Arthroscopic Surgery. J Clin Med. 2021;10(4):599. Published 2021 Feb 5. doi:10.3390/jcm10040599” “A significant group of the population suffers from shoulder pain due to acute or chronic tendon injuries, which are becoming a considerable cause of work disability. Various tendon disorders may appear simultaneously in different localizations of the shoulder [14]. Rotator cuff tendinopathy and tears (RCTs) are the most common ones among them. They are usually associated with the long head of the biceps tendon (LHBT) pathology, superior labrum anterior to



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posterior (SLAP) injuries, subacromial impingement syndrome and acromioclavicular joint (ACJ) disorders [15,16,17,18]. After the supraspinatus tendon, the most common injured structure of the rotator cuff (RC) complex, biceps tendon is an element of compensation of the abnormal forces and tears of which predispose to subsequent instability, and further subscapularis tendon tears. Kelly et al. revealed LHBT disorders with various co-existing shoulder pathologies, such as RCTs, resulting in instability of the shoulder and subacromial impingement [19]. Furthermore, the massive RCTs can lead to accelerated omarthrosis and shoulder dysfunction. Complex and multi-tendon shoulder injuries significantly complicate the process of diagnosis, treatment, and rehabilitation.”

Material&Methods: 1. This text: “Each participant underwent concurrent, synchronized motion and EMG analysis. Postoperative outcome measurements were collected by two medical doctors and a bioengineer. The primary outcome measures were the Constant-Murley score (CMS), the Visual Analogue Scale (VAS) and the Disability of the Arm, Shoulder, and Hand (DASH) score. Secondary outcome measures were the biomechanical parameters in terms of Range Of Motion (ROM), quality of movement (velocity and acceleration) and muscle activation.” should be after surgical treatment paragraph.

2. What were the indications for AA and MO techniques?

Results: well written

Discussion: Extremely modest, You should discuss the topic more extensively. Moreover, maybe transfer some data from the introduction section, is it reasonable. The rehabilitation issue should be also discussed, there is recent paper about the RCTs and LHBT mixed injuries and the issue of rehabilitation after shoulder arthroscopy is comprehensively discussed. “To increase ROM and muscular strength after arthroscopy, it is important to consider the position and kinematics of the scapula. Scapular position and kinematics are important factors that can affect patient symptoms [15,26]. Scapular muscles (serratus anterior, trapezius) are as important for the shoulder as rotator cuff muscles [27,28]. Motivation and



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cooperation with the patient during the rehabilitation process can influence the final results. The longer follow-up in our cohort correlated positively with the postoperative ASES score and it may be linked to the longer period of cooperation with a physiotherapist. Moreover, the sport-active group had better functional outcomes, which is probably based on improved preoperative musculoskeletal system efficiency and motivation.” Zabrzyński, J.; Huri, G.; Gryckiewicz, S.; Çetik, R.M.; Szwedowski, D.; Łapaj, Ł.; Gagat, M.; Paczesny, Ł. Biceps Tenodesis Versus Tenotomy with Fast Rehabilitation Protocol—A Functional Perspective in Chronic Tendinopathy. *J. Clin. Med.* 2020, 9, 3938. <https://doi.org/10.3390/jcm9123938>). References - updated and revised according to my suggestions Tables and Figures Add abbreviations under each table and Figure. The title of Table 1 should be revised. Table 4 -add mean age of patients in different modalities of LHBT treatment.



RE-REVIEW REPORT OF REVISED MANUSCRIPT

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Author's Country/Territory: Italy

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Scientific quality	<input type="checkbox"/> Grade A: Excellent <input type="checkbox"/> Grade B: Very good <input checked="" type="checkbox"/> Grade C: Good <input type="checkbox"/> Grade D: Fair <input type="checkbox"/> Grade E: Do not publish
Language quality	<input type="checkbox"/> Grade A: Priority publishing <input checked="" type="checkbox"/> Grade B: Minor language polishing <input type="checkbox"/> Grade C: A great deal of language polishing <input type="checkbox"/> Grade D: Rejection
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Peer-reviewer	Peer-Review: <input checked="" type="checkbox"/> Anonymous <input type="checkbox"/> Onymous



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statements

Conflicts-of-Interest: [] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Authors have answered to all my concerns. I accept the paper with no further revision needed.