Peer Review File

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Review Comments

Reviewer A

An overall great and comprehensive review of the literature - few minor edits suggested.

Comment 1: Line 34 - obtaining precise measurements of GBL, which is defined as <13.5%

I wouldn't say glenoid bone loss is defined as 13.5 %. that is simply one study that suggested inferior clinical outcomes with bone loss as low as this. please be clear as to what we are describing - GBL in general or subcritical glenoid bone loss - which is generally less than whatever is being considered "critical" 20-25% etc. This similarly applies to the introduction. I would suggest revising to a range of 10-20 or 25% to be inclusive of all available literature in the area. There are also a few systematic reviews that have looked at available literature and commented on cut-offs based on current literature that suggest increased failure above a certain threshold - can quote these as well if appropriate.

Gouveia, Kyle, et al. "Arthroscopic Bankart repair with remplissage in comparison to bone block augmentation for anterior shoulder instability with bipolar bone loss: A systematic review." Arthroscopy: The Journal of Arthroscopic & Related Surgery 37.2 (2021): 706-717.

Reply 1: We agree that there is variability and some controversy in the literature defining the exact threshold for subcritical glenoid bone loss. As the title reflects, the focus of this review is specifically the threshold of subcritical bone loss, which we define as <13.5% supported by Shaha and colleagues landmark paper associating glenoid bone loss >13.5% with decreased WOSI scores (even without recurrent episodes of instability) in the high demand active-duty population. Just as you suggest, there are authors (Gouveia et al) who recommend considering even lower thresholds for subcritical glenoid bone loss <10% -- with higher failure rate in arthroscopic Bankart repair alone versus stabilization procedure with a bone block.

Shaha JS, Cook JB, Song DJ, et al. Redefining “Critical” Bone Loss in Shoulder

Instability: Functional Outcomes Worsen With "Subcritical" Bone Loss. *Am J Sports Med*. 2015;43(7):1719-1725. doi:10.1177/0363546515578250

Changes in the text: For the purposes of this review, we focus on subcritical bone loss which we define as >13.5% with supported literature provided. Ranges approaching 20% to 25% represent critical bone loss. Therefore, no changes were made to the text.

Comment 2: Line 153 - perhaps useful to also mention the NISI score for non operative vs. operative management of shoulder instability...

Reply 2: The NISI score and citation were added into the brief discussion of non-operative management.

Tokish JM, Thigpen CA, Kissenberth MJ, et al. The Nonoperative Instability Severity Index Score (NISIS): A Simple Tool to Guide Operative Versus Nonoperative Treatment of the Unstable Shoulder. Sports Health. 2020;12(6):598-602. doi:10.1177/1941738120925738

Change in the text: We have modified our text as advised (lines 121-125).

Comment 3: 167 - can also add 3D MRI is acceptable alternative to 3D CT recon - 2 papers have been published on this.

Reply 3: These two citations have been added to the manuscript.

Lander ST, Liles JL, Kim BI, Taylor DC, Lau BC. Comparison of computed tomography and 3D magnetic resonance imaging in evaluating glenohumeral instability bone loss. J Shoulder Elbow Surg. 2022;31(11):2217-2224. doi:10.1016/j.jse.2022.06.015

Stillwater L, Koenig J, Maycher B, Davidson M. 3D-MR vs. 3D-CT of the shoulder in patients with glenohumeral instability. Skeletal Radiol. 2017;46(3):325-331. doi:10.1007/s00256-016-2559-4

Change in the text: We have modified our text as advised (lines 144-148).

Reviewer B

Generally, a well-written narrative. Some minor comments.

Comment 1: Would be valuable to include on conjoint tendon transfer: https://www.jsesinternational.org/article/S2666-6383(21)00050-5/fulltext

Please look a reference from this article.

Reply 1: Although this data is limited to small case series, we have added a discussion including the available literature on conjoint tendon transfer with appropriate citations.

Change in the text: We have modified our text as advised (lines 248-256).