Peer Review File

Article information: ttps://dx.doi.org/10.21037/aoj-22-53

Comment 1: Preoperative Radiologic Evaluation, lines 89-101. Might this information be more appropriate in the legend of Figure 2? The authors did a great job describing the Walch Classification on lines 77-88, a similar approach with this information would also help the readers better understand in my opinion.
Reply 1: Thank you for this suggestion. The information from lines 89-101 was moved to the legend of Figure 2 as suggested.
Changes in the text: Text from lines 89-101 moved to legend of Figure 2.

Comment 2: Bone Grafting, line 160. "improved"
Reply 2: I am not quite sure what this comment is asking us to do. If you could clarify this that would be very helpful.
Changes in the text: None

Comment 3: Severe Glenoid Bone Loss or Retroversion >15 deg, lines 236-240. What was the age of these patients? Please report ages as medians and ranges here and wherever applicable.
Reply 3: Thank you for this suggestion, we have upated mean/ranges of ages where appropriate.
Changes in the text: Added the following:
-average age at time of surgery was 68 years (range, 50-85 years),
-mean age of the patients at the time of surgery was 74.1 years (range, sixty-six to eighty-two years)

Comment 4: Suggested Treatment Algorithm, line 261. This is the best part of the commentary in my opinion. With the trend toward younger patients undergoing RTSA, how do we truly determine their activity level or expectations? What steps should the surgical team consideration to be sure that functional potential is not left behind by selecting the wrong implant?
Reply 4: Thank you, we have added some explanation regarding determining functional level.
Changes in the text: Added the following:
-Activity level should be assessed thoroughly by the surgeon and a shared discussion between the patient and surgeon should take place in these patients. Particular attention should be paid towards overhead activities, manual labor, and interest in sporting activities.

Comment 5: Also within this section I recommend that the author's propose a prospective research study design that would be able to confirm the concepts presented in the suggested treatment algorithm.
Reply 5: Thank you again for this suggestion, we have added your suggestion of a prospective research study design.
Changes in the text: In the future, we believe it is important for prospective studies to further improve our suggested treatment algorithm. Specifically, defining specific functional and age thresholds for which the benefits of anatomic TSA may outweigh reverse TSA. Given the complexity of defining both functional and age-related cutoffs for anatomic TSA vs. reverse TSA, this research question would probably best be answered by a large prospective observational study with long-term follow-up.

Comment 6: Figure 1. Excellent and insightful.
Reply 6: Thank you.
Changes in the text: None

Comment 7: Figure 2. Detailed and a bit confusing. Please see earlier comment about moving some text to the figure legend and simplifying the information a bit.
Reply 6: We have added the text to the figure legend as well as condensed/simplified the information a bit.
Changes in the text: Figure 2 legend:
On a mid-axial cross-section of the glenoid, point E represents the medial scapula border and point D represents the midportion of the glenoid. Point A is the anterior border and point C is the posterior border of the glenoid on this cross-section. Point B is the point at which the glenoid becomes biconcave (if bone loss is severe enough). Line ED is first drawn which is the transscapular axis, or Friedman line. Line AB is then drawn which is in-line with the native glenoid, while line AC denotes the intermediate glenoid. This results in two angles, shown as angle RV2 (retroversion of the intermediate glenoid), and RV3 (neoglenoid retroversion). Humeral head subluxation can also assessed using the same cross-section, which is calculated as HI/GI.

Comment 8: Figure 3. Please add some information about key augment characteristics (peg location and length, angles, materials, etc.).
Reply 8: Thank you for this suggestion, we have added a figure legend and your suggestion about key augment characteristics.
Changes in the text: Artistic rendering of various augmented glenoid component designs (panels A-C). Augmented components include polyethylene designs utilized for anatomic TSA (panel A) and are made of metal baseplate components used in RTSA (panels B, C). All-polyethylene monoblock designs may be stepped as seen in panel A (DePuy Synthes, Warsaw, IN) or include half or full wedges. Augmented metal baseplates may also either include a full, half, or lateralized design. An example of a half-wedge augmented glenoid is depicted in panel B (Wright Medical Group N.V., Memphis, TN). In addition, augmentation may be posterior and/or superior, and an example of a posterior/superior augmented design is demonstrated in panel C (Exactech Inc., Gainesville, FL).