



What is wrong in comparison of single- and double-row repairs in rotator cuff tears?

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Abstract

When the meta-analysis studies comparing single-row (SR) and double-row (DR) repair methods in the literature are examined, the SR method is unsuccessful in re-tears especially in large and massive tears. In this study, I was able to determine that, except for Barber's work, double-loaded anchors were used for the SR repair. Particularly, low tension of the repaired muscle–tendon unit is important in terms of repairable massive retracted cuff tears. For this reason, medially placed triple-loaded anchors were developed. Again, the SR ripstop method using suture tape, in terms of re-tears and success rates, is similar to the double-row suture bridge method. Based on current systemic review and meta-analysis studies, it is not appropriate to adapt SR and DR rotator cuff repair results to today's conditions.

Keywords Rotator cuff · Single row · Double row · Ripstop

I would like to share some of my views on the study titled 'Do functional outcomes and cuff integrity correlate after single versus double-row rotator cuff repair? A systematic review and metaanalysis study'.

When the meta-analysis studies comparing single-row (SR) and double-row (DR) repair methods in the literature are examined, there is no significant difference between the two groups in terms of functional scores. In addition, it is reported that the SR method is unsuccessful in re-tears especially in large and massive tears. In this study, I was able to determine that, except for Barber's work, double-loaded (DL) anchors were used for the SR repair in all other cases [1]. Although these studies are collected under the same name, the combinations of sutures and knotting techniques may be different. In particular, it should be noted that different radiological evaluation methods were used to evaluate re-tears. For these reasons, no meta-analysis studies were conducted on homogeneous groups.

The basic principles for ideal rotator cuff repair include footprint restoration, minimized motion at the tendon–bone interface, initial fixation strength and low tension of the repaired muscle–tendon unit. Of these principles, especially

low tension of the repaired muscle–tendon unit is important in terms of repairable massive retracted cuff tears. For this reason, medially placed triple-loaded anchors were developed. The durability of the repair depends on the number of sutures passing through the tendon rather than the number of anchors used [2]. There have been significant improvements in re-tear rates and clinical outcomes after the use of triple-loaded (TL) anchors [3]. Again, the SR ripstop method using suture tape, in terms of re-tears and success rates, is similar to the double-row suture bridge method. It is even more stronger than DR-SB. There are valuable studies in recent literature comparing SR applications with ripstop and TL anchor to double-row methods [4]. Unfortunately, there are no meta-analysis studies in the literature comparing these new SR methods with DR methods. But this should not lead to the conclusion that the DR is superior to the SR. When these new SR methods are used with various biological methods such as bone vents or combined suture methods, it is shown that there is no problem in terms of footprint restoration [5]. Even in one study, the rate of healing was shown to be higher. Moreover, disruption of the tendon circulation due to strangulation of the tendon in the DR method is another issue discussed.

Refixation is an important question for re-tear. As we know, Cho type 1 re-tears are encountered in SR repairs. On the other hand, in the case of DR repairs, Cho type 2

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re-tears are encountered. Therefore, it is almost impossible to repair Cho type 2 re-tear.

Based on current systemic review and meta-analysis studies, it is not appropriate to adapt SR and DR rotator cuff repair results to today's conditions. I hope that Mr. Shoby and his colleagues will consider my criticisms as a contribution to their work.

Compliance with ethical standards

Conflict of interest The author declares that he has no conflict of interest in relation to this article.

Ethical approval This article does not contain any studies with human participants performed by any of the authors.

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