To the Editor:

We read with great interest the recent article by Li et al. entitled “Are Platelet Concentrates an Ideal Biomaterial for Arthroscopic Rotator Cuff Repair? A Meta-Analysis of Randomized Controlled Trials,” published in the November issue of *Arthroscopy.* The investigators performed a meta-analysis of 7 randomized controlled trials (RCTs) to investigate the efficacy of concomitant platelet concentrate use in arthroscopic rotator cuff repair. This is an excellent work that we really appreciate. However, after thoroughly reading the article and analyzing the included studies, we found 4 issues that should be explored.

First, Li et al. stated “The present study aims to conduct a meta-analysis of Level I evidence studies to investigate...” in the abstract and introduction. However, 2 included RCTs by Rodeo et al., Antuna et al., and Sánchez Márquez et al. (Antuna et al. and Sánchez Márquez et al. reported the same RCT but with different periods of follow-up) are Level II evidence not Level I evidence, according to the articles themselves.2,4

Second, the postoperative Simple Shoulder Test score was not in accordance with the original study. One included RCT by Gumina et al.5 reported that the mean ± standard deviation of the postoperative Simple Shoulder Test score was 10.1 ± 1.0 in the control group. However, Li et al. incorrectly listed the data as 11.4 ± 1.2. Hence, Li et al. incorrectly concluded that there was no significant difference between the 2 groups (SMD, −0.28; 95% confidence interval, −1.55 to 1.00; \( P = .67; I^2 = 90\% \)). Actually, the difference was significant between the 2 groups at 1-year follow-up when we input the correct data (SMD, 0.42; 95% confidence interval, 0.06 to 0.79; \( P = .02; I^2 = 0\% \) (Fig 1).

Third, 4 included studies3,5-7 provided postoperative data of Constant scores, and Li et al. pooled these data. However, Gumina et al.5 reported that the preoperative Constant shoulder scores differed significantly between the 2 comparative groups in their research (\( P = .01 \)). Hence, the data of Constant scores from Gumina et al.’s study should be excluded, or the sensitivity analysis should be performed.

Fourth, Li et al. reported that the heterogeneity (\( I^2 \)) between studies was more than 75% for 3 variables.1 This means that it is not appropriate to pool them, or the quality of evidence should be downgraded because of potential inconsistency.8 Moreover, \( I^2 \) values greater than 90% are very rare in meta-analyses. The meta-analysis by Li et al. is an important addition to the literature. However, they should solve all these issues in their article.

Jia-Guo Zhao, M.D.
Zeng-Liang Wang, M.D.
Li Zhao, M.D.
Tianjin, China

References
2. Rodeo SA, Delos D, Williams RJ, Adler RS, Pearle A, Warren RF. The effect of platelet-rich fibrin matrix on

![Fig 1. Forest plot of Simple Shoulder Test score after inputting the correct data.](image-url)


Authors’ Reply

To the Editor:

We thank Drs. Zhao and Wang for taking the time to critically review our article. They raised 4 questions about the article. We would like to express our appreciation to the readers for pointing out the shortcomings in our article. Our responses to these comments are listed as follows.

1. Drs. Zhao and Wang argue about the evidence levels of the included studies. As to this, 3 points must be emphasized. First, we agree with them that the RCT by Rodeo et al. is of Level II evidence, so the statement in our article is flawed. However, in the abstract we stated that our review was Level II evidence because the statistical reviewer had mentioned this point previously, so the statement in the article is a clerical error. Second, the study by Sánchez Marquez et al. was not included in our review at all, so we do not understand what the readers want to express. Third, in our opinion, the included RCT by Antuna et al. is Level I evidence. Furthermore, according to “Levels of Evidence for Primary Research” (http://www.arthroscopyjournal.org/content/authorinfo), the article is also of Level I, not as the readers suggested, Level II.

2. We thank Drs. Zhao and Wang for the amendment of our error on the Simple Shoulder Test (SST) score. However, only 2 studies (n = 120) reported the SST score. Besides, we have stated that post-operative retears, which were invariable, was the primary outcome of the review. Although the Forest plot showed a significant difference between the 2 groups, favoring the platelet concentrates (PC) group, combining the retears and the other 4 outcomes, we still think the use of PC is unnecessary.

3. Regarding the included study by Gumina et al. about Constant scores, we have performed the sensitivity analysis as Drs. Zhao and Wang asked. As shown in Figure 1, the result from a random effects model showed that there was not a significant difference between the 2 groups (SMD, -1.71; 95% confidence interval, -8.06 to 4.64; P = .60). Heterogeneity across the studies was significant (P = .0008; I², 86%). The result is consistent with the previous one, so our results are robust.

4. We have discussed the heterogeneity and the possible reasons in the Limitations section. To eliminate the heterogeneity, standardized PC biomaterial and more RCTs are needed.

Finally, we thank Drs. Zhao and Wang for their great interest and sincerely look forward to their article indicating the demonstrated advantage of PCs on the arthroscopic repair of full-thickness rotator cuff tears.

Xue Li, M.D.
Xiaofang Liu, M.D.
Bin Yu, M.D., Ph.D.
Foshan, China

© 2015 by the Arthroscopy Association of North America
http://dx.doi.org/10.1016/j.arthro.2014.11.003

Fig 1. Meta-analysis of randomized controlled trials evaluating Constant scores. Con, control; PC, platelet concentrates.