Author’s response to reviews

Title: Narrow Locking Compression Plate VS Long Philos Plate for Minimally Invasive Plate Osteosynthesis of Spiral Humerus Shaft Fractures

Authors:

Jae-Jung Jeong (jjeong@catholic.ac.kr)

Sang-Eun Park (rockwood74@naver.com)

Whan-Hee Lee (Hwanhee337@gmail.com)

Jong-Hun Ji (jijh87@gmail.com)

Min-SiK Park (minsik84@hanmail.net)

Yong-Taek Park (qkrdydxor@gmail.com)

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Comments https://blog.naver.com/chakagi/221412436253

1) Can the authors comment on any learning curve they had when they changed their technique from using the NLCP to the LPP?

- Thanks for your comments. For the techniques had been performed by one senior shoulder surgeons with more than 10 years of experience in the field, there wasn’t significant learning curve with this technique. We have added the phrase in line 108-110.

- “The introduction time of this LPP was different in Korea and we could use this LPP in the later period of our study. We used conventional NLCP in the early period and then used LPP consecutively in these fractures.”

2) I presume that the 2 LPP failures were early in their LPP series, particularly as the authors then changed their technique to add a middle compressions screw.

-Thanks for your comments. Following your suggestions, we have added new phrase.

-We add these in line 168 “ 33 patients had complete bone union and 2 patient who had failed with initial surgery using LPP achieved complete union with revision surgery using NLCP and bone graft.”
-And we have deleted the phase at Line 165 “Without any additional procedures including bone graft or refixation,"

3) Line 155 is the addition of compression screws in the middle part of the fracture not introducing a clash of fracture fixation philosophies?

-Thanks for your comments. Following your suggestions, we have added new phrase in the discussion session (line 216).

“Cases of malalignment and malunion have been reported in fixation using indirect reduction and MIPO techniques [7-12] and thus precision in gap reduction is considered to be helpful in preventing such complications. In the current study, after we had failed to achieve bony union in initial 2 cases using LPP, we introduced a method to reduce fracture gaps using reduction clamps, followed by positional screw insertion to sustain the fracture-gap reduction. And there were no patients failed to achieve bony union afterwards.”

4) There have been some recent concerns raised in the use of locking plates for long-bone (lower limb) fractures, can the authors comment on whether they foresee similar problems in upper limb fracture when using long locking plates?

-Thanks for your comments. Question 3 is similar to Question 4, so that we have added new phrases in the discussion session (line 216).

5) In the Results section, I don't think the authors can state that All 35 patients had bone union, as 2 had been revised. This is misleading. They can state that these 2 patients had bone union after their revision surgery. Hence 33 or 35 had bone union after the primary surgery. 2 or 35 had revision surgery and then achieved bone union! There is no mention of these 2 patients in the Results/Discussion section at all?

-Thanks for your comments. Following your comments, We already had changed some sentences in the result (line 168 ) and discussion session (Line 216).

6) Was there a difference in blood loss and operative time statistically significant between the groups? This should be stated in the Results section.

-Thanks for your comments. Following your suggestions, we have added the statement regarding blood loss at result section (Line 192). And, we have already stated about operation time in Line 191.

7) Lines 225-239 really belong in the RESULTS section. One can discuss the findings but the Stats should be in the results area only.
-Thanks for your comments. Following your suggestions, we have revised the Result section (we had moved those paragraphs to the Result section and revised discussion section within the context)

8) The Discussion section should focus much more on the two complications and why the metalwork failed. There are concerns on the use of locking plates in long bone fractures and this should be commented on; particularly as the authors mention 2 metalwork failures.

-Thanks for your comments. Following your comments, We already had changed some sentences in the result (line 168) and discussion session (Line 216).

9) The authors should also discuss the advantages and disadvantages of their 2 plating systems, and focus on why they think that the LPP is better.

-Thanks for your comments. Following your suggestions, we have added the followings to the discussion section (Line 208–215)

10) The conclusion that was drawn does not match the results.

"Even though MIPO technique using LPP is easier and more accurate reduction method, rigid fixation should be considered".

There is no discussion about the rigidity of the fixation, and no analysis of the reasons for metalwork failure. The conclusions should reflect the data from the paper.

- Thanks for your comments. Following your suggestions, we had removed statements about rigidity because we haven’t analyzed about the rigidity in the study (Line 262)

11) There are some typos, such as "inserted" instead of "insered" Line 150, and Line 190 "symptoms" not symptoms.

-Thanks for your comments. Following your suggestions, we have corrected those typos.