Peer Review File

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Review Comments

Reviewer A

I thank authors for an interesting study about patient expectations and their effect on surgical outcomes.

Comment 1: First, unfortunately study population was quite small and significant results were not achieved.

Reply 1: While results did not reach statistical significance, we believe this is still important data that contributes to the literature. There is vast heterogeneity in the way that expectations and satisfaction within spine surgery is measured in the literature. The primary objective of this paper was to outline and describe a reproducible, standard way to measure expectations and satisfaction. While there is certainly need for future research, there is value in demonstrating the trend we observed using our technique.

Comment 2: Second, I would like to see more clarification on how much the patient satisfaction was based on meeting preoperative expectations

and how much on actual gains of surgery.

Reply 2: I think this is a complex question which gets to the heart of the topic. The patients in this cohort were not given any instruction as to what to base their satisfaction on. The question as to whether or not to have surgery again we used as a proxy to measure their experience. We presume, based on literature review and on our study, that a patient's consideration of their experience would be based to some degree on the success of their surgery (pain relief in this case) and to some degree their realistic goal (preop expectation). The true goal of this research is to measure precisely how large of an impact meeting preoperative expectations will have on a patient's evaluation of the success of their surgery. Is it important at all? We think it is, and we hope the method presented in our study can be used to continue investigating.

Clarifying statements added to the manuscript

See line 156-157

See line 228-231

Comment 3: Third, did patients complete their preoperative expectations after discussion with surgeon? Did the surgeon try to change the patients' expectation toward more realistic?

Reply 3: This has been clarified in the manuscript--- see lines 128-130. Patients filled out their preoperative expectation documents after having a preop discussion with the attending spine surgeon. This discussion was the typical preoperative consent process. As with any discussion regarding outcomes, complications and postoperative course, the surgeon sought to provide patients with an understanding of the probable outcome and also a realistic spectrum of possible outcomes, however our goal was to not attempt to influence patient-created expectations outside of the informed consent process.

Reviewer B

Comment 1: It is surprising for a surgeon to read à paper based on only 45 patients with 7 lost of follow-up, recruited in one year (poor activity), with two different segments of the spine (cervical and lumbar), where we don't know neither diagnosis nor treatment. Even with a nice discussion, such article can't be published in a surgical journal.

Reply 1: We believe this manuscript has power in the method we used to measure results. It is simple, easy and reproducible. This is a topic which certainly needs more dedicated research, we hope our study may serve as a benchmark for how to measure expectations, results and satisfaction.

Reviewer C

Thank you for letting me review your article. The topic of preoperative expectations and their role in spinal surgery outcomes and satisfaction has been a topic of interest for many years.

Comment 1: It is very interesting but it is a small cohort.

Reply 1: Yes, the cohort is small. The objective of this study was to define and practice an easy, reproducible method to measure preoperative expectations and post op satisfaction. Despite a smaller cohort, we do still believe this trend we observed in these patients using the simple method used is an interesting and important contribution to the literature.

Comment 2: Of the potential operative candidates during the study interval, a total of 45 patients were elected to participate in the study. Why? How many patients were able, and why they did not want to participate?.

Reply 2: There was a total of 170 patients that ultimately met inclusion criteria and were eligible to participate in this study. Patients chose not to participate for a variety of reasons. Most patients likely found it

somewhat burdensome to fill out paperwork during their preoperative visit. This is a weakness of our study design. Patients may have been more willing to participate if the study was sent out to be filled at a different time—but that also leaves open the risk of those patients not remembering to do the survey.

Clarifying statements line 169-170, 287-290

Comment 3: There were 12 patients who underwent cervical surgery and 33 who underwent lumbar surgery (Figure 2). Do primary and revision surgery expectations differ? What type of surgery was performed in the cervical and lumbar spine? This is a big limitation.

Reply 3: We agree this is certainly a limitation of this study. Our cohort represents a variety of elective cervical and lumbar procedures of differing levels, chronicity, pathology and severity. We attempted to account for this by measuring and presenting the "delta." See Table 1. This is an attempt show satisfaction in terms of a change from baseline, regardless of where they started. Despite this, we recognize this is a limitation of the study and have clarified this in our discussion.

This is addressed in the manuscript

Lines 282-285

Comment 4: The average age for the cervical group was 54.3 years and for the lumbar group was 49.3 (Figure 3). There are very young patients, for the usual patients operated especially in the lumbar segment.

Reply 4: It is unclear to my precisely why our cohort was on the younger side but I would presume this is likely a function of our smaller cohort. Older patients may have self selected towards not wanting to participate. Regardless— we agree that we have presented a younger cohort.

Comment 5: Your aim was to create a standard means to assess patient preoperative expectations as well as how those expectations are met in the mid-term postoperative period. Although your conclusion only put about how preoperative expectations are met in the mid-term postoperative period, what are the standard means to assess patient preoperative expectations?

Replay 5: The standard means to assess patient preoperative expectations is as follows:

1.Patients were asked to indicate where they expected their neck/back

pain and arm/leg pain to be 1 year after surgery. This was based on a validated VAS scale.

2.Cervical patients were asked to fill out the NDI how they would expect to fill it out at 1 year after surgery.

3.Lumbar patients were asked to fill out the ODI how they would expect to fill it out 1 year after surgery

This is described in our methods section lines 131-137