

Peer Review File

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Reviewer A

Comment 1: (Abstract; Lines 31 – 33: Grammar and sentence construction error - Rephrase the statement – While..... is a limited number of case series and cohort studies.)

Reply 1: Modified text as advised (see Page 2, line 25-27)

Changes in the text: see Page 2, line 25-27

Comment 2: (Abstract; Lines 34 – 36: n = 33 should be in brackets or the statement should be rephrased as, “This..... case series of 33 patients” or “patients (n = 33). Similar errors can be seen in different parts of the papers and must be corrected.)

Reply 2: Modified methods section of abstract as advised (see Page 2, line 30) and corrected similar errors in rest of paper.

Changes in the text: Modified text (see Page 2, line 30), with the correction of similar errors throughout the paper (Line 29, 33, 34, 104-105, 147-148, 153, 178-181, 200, 204-205, 235)

Comment 3: (Abstract; Similar error in line 39. Satisfactory phrasing of conclusions, good key words and key findings, novelty and implication.)

Reply 3: Modified results section of abstract as advised (Page 2, line 35)

Changes in paper: (Page 2, line 35)

Comment 4: (Introduction; Line 63: Would ‘fabricates’ be a better word?

The authors must pay attention to the sentence construction aspect.

Reply 4: Fabricates is a more suitable word, changed (Page 3, line 50)

Changes in paper: Wording changed (Page 3, line 50)

Comment 5: (Introduction; Lines 63 – 143: Proofread this section as the sentences are unnecessarily lengthy. There is no technical inaccuracy in this section, however, there is a need to rephrase the lengthy statements. An example would be Line 120: When considering a potential positive bias in the research publication, the reported benefits of biomodel may not be practical positive potential bias the reported benefits of biomodels may not be practical.)

Reply 5: Reviewed section and rephrased lengthy statements. (see Page 3-7, lines 50-129)

Changes in paper: Multiple wording changes and reduction in sentence length. (see Page 3-7, lines 50-129). E.g in Page 6 line 105-109, for the revision of “When considering a potential positive bias in the research publication, the reported benefits of biomodel may not be practical positive potential bias the reported benefits of biomodels may not be practical.”

Comment 6: (Introduction; Lines 117-119 – Rephrasing needed (sentence construction issues).

Reply 6: Rephrased sentence to split it into two sentences (Page 5, line 102-105)

Changes in paper: Rephrased sentence (Page 5, line 102-105)

Comment 7: (Introduction; Lines 121 -123 – Rephrasing – There is no need to repeat spinal surgeons twice (sentence construction issues).

Reply 7: Reference was changed and sentences rewritten. (Page 6, line 107-112)

Changes in paper: Sentence rewritten. (Page 6, line 107-112)

Comment 8: (Rationale and Knowledge Gap; Lines 146 – 149 – The sentence is too long and is not clear. Please reduce the length of the sentence or split it to separate sentences.

Reply 8: Sentence split, now a total of 3 sentences for clarity (Page 7, line 133-136)

Changes in paper: (Page 7, line 133-136)

Comment 9: (Rationale and Knowledge Gap; Lines 149-151 – Sentence construction and grammar there the literature is unclear

Reply 9: Modified sentence and grammar for clarity. (Page 7, line 136-139)

Changes in paper: (Page 7, line 136-139)

Comment 10: (Case Description; Similar comments as in the abstract. Sample size such as n=33 should be in brackets or you clearly state them in words.)

Reply 10: Changed n = 33 into (n = 33) after the category (vertebral endoscopic surgeries). (Page 8, line 147-148)

Changes in paper: (Page 8, line 147-148)

Comment 11: (Case Description; Also add the IRB number of the study in the materials and methods section.)

Reply 11: IRB number added to section. (Page 8, line 152-153)

Changes in paper: (Page 8, line 152-153)

Comment 12: (Case Description; Biomodel production: Although the section has details on the machine, materials and software, it needs to be organized for the reader's understanding. As mentioned before, please split lengthy statements and clearly put in the details of the 3DP material, technology and image processing)

Reply 12: Lengthy statements split (Page 8, line 163-168) into two sentences. Details of 3DP material (Page 8, line 166), technology (Page 8, line 164-165) and image processing (Page 8, line 164) are more clearly stated. Minor grammatical change (Page 8, line 170)

Changes in paper: (Page 8, line 162-170)

Comment 13: (Case Description; You have missed out an important detail on 3 Matic – it is a software from Materialise. The manufacturer details must be clear.)

Reply 13: Manufacturer details more clearly stated and added software company's name. (Page 8, line 165)

Changes in paper: (Page 8, line 165)

Comment 14: (Case Description; Data collection should have details on the statistics used, atleast mention them Lines 193 – 194 percentage of all cases in which there was preoperative, intraoperative benefit or benefit to learning the operation this is not sufficient detailing.)

Reply 14: Description of statistics added with more detail on the calculation of the percentages of cases with specific benefits. (Page 9, line 177-181)

Changes in paper: (Page 9, line 177-181)

Comment 15: (Discussion; Split complex and compound sentences length of the sentence to be kept in mind)

Reply 15: Changes to compound sentences in the discussion and reduced length of sentences. (Page 10, line 195-196), and for sections specifically mentioned in Comments 16-20. Minor grammatical changes (Page 9, line 189)

Changes in paper: (Page 10, line 195-196), (Page 9, line 189)

Comment 16: (Discussion; Lines 222 – 231: Phrasing and grammar a benefit of any kind to a benefit of some kind or some benefit)

Reply 16: Rephrased sentence and grammar, so it is some benefit, with recorded no benefit in the minority. (Page 10, line 204-205). Other phrasing and grammatical changes were made for the remainder of paragraph (Page 10, line 208-213)

Changes in paper: (Page 10, line 204-213)

Comment 17: (Discussion; Lines 224 – 226: Rewrite these lines as they are not clear at 54.5%?? I assume this is a typo.)

Reply 17: 54.5% is the incidence of preoperative benefit (Page 9, line 186 for this statistic). The sentence was rephrased for clarity but the figure was not changed (Page 10, 204-209)

Changes in paper: Edited sentence for clarity (Page 10, 204-209)

Comment 18: (Discussion; Lines 228- 231: Rewrite the sentence to correct the error. I assume you meant that Figure 2 is representative of more aspects of planning being improved and in line with the surgeon's comments. This has to be rephrased. There is lack of clarity in important statements.)

Reply 18: Rewrote the sentence to clarify statement regarding the trend of more benefits early on in case series. No changes to the sentence with reference to the 54.5% statistic as it is not related to the trend discussed here. Error in Figure 2 being Table 3 changed. (Page 10-11, line 212-214)

Changes in paper: (Page 10-11, line 212-214)

Comment 19: (Discussion; Lines 238 – 240: The incidence of intraoperative benefits at 60.6% does not directly correspond to metrics within other studies, such as improved operation time, but is a similar incidence of benefits reported by comparable studies in spinal surgery)

Reply 19: Modified sentence and paragraph for clarity (Page 11, line 223-226)

Changes in paper: (Page 11, line 223-226)

Comment 20: (Discussion; Explanations and Implications are clear, however, it has the same sentence construction errors. An example: Furthermore, this trend applied to accelerating learning, with improvements $n = 3$ times in the first 5 cases (60%) at the beginning of the case series and represents a benefit to the early learning curve of an operation.)

Reply 20: Reconstructed sentence for clarity. (Page 11, line 233-236)

Changes in paper: Reconstructed sentence (Page 11, line 233-236)

Comment 21: (Conclusion; The section on conclusions can be a bit more detailed, my suggestion would be to have 200 to 300 words in the conclusion. Also add the limitations of your findings and any potential for future work in this section.)

Reply 21: Added detail to the conclusion (Page 12-13, line 250-266). The limitations of findings were added (Page 13, line 258-259) and potential for future work discussed (Page 13, line 259-262)

Changes in paper: (Page 12-13, line 250-266)

Thank you for reviewing this submission.

Reviewer B

Comment: This manuscript is well written and interesting and also well managed. I think it is suitable for publication in our journal.

Reply: No action requested or taken. Thank you for reviewing this submission.

Reviewer C

Comment: (If I understand this correctly, only 1 surgeon was involved in the study? If so, would this not be a limitation of the study? Would this have an impact on the outcomes? I believe this needs to be addressed.)

Reply: We added limitation with discussion (see Page 10, line 196-197). Thank you for reviewing this submission.
