

REVIEWER'S REPORT

Manuscript No.: IJAR 52363

Date: 20/6/2025

Title: EVALUATION OF SOFT TISSUE AND SKELETAL CHANGES FOLLOWING BILATERAL SAGITTAL SPLIT SETBACK SURGERY A RETROSPECTIVE STUDY

Recommendation:

Accept as it is

Accept after minor revision – YES

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity		✓		
Significance	✓			

Reviewer Name: Dr. Vasudha Kommu

Date: 20/6/2025

Reviewer's Comment for Publication.

(To be published with the manuscript in the journal)

The reviewer is requested to provide a brief comment (3-4 lines) highlighting the significance, strengths, or key insights of the manuscript. This comment will be Displayed in the journal publication alongside with the reviewers name.

This manuscript titled “EVALUATION OF SOFT TISSUE AND SKELETAL CHANGES FOLLOWING BILATERAL SAGITTAL SPLIT SETBACK SURGERY A RETROSPECTIVE STUDY” provides valuable insights into the skeletal and soft tissue changes following Bilateral Sagittal Split Setback Osteotomy (BSSO) with rigid internal fixation for Class III malocclusion. By analyzing cephalograms at three time points, the authors present specific relapse rates for both hard and soft tissue pogonion, point B, and menton. The identified correlations between hard and soft tissue changes offer useful data for presurgical planning and predicting aesthetic outcomes in BSSO procedures.

The retrospective and single-center nature of this study, coupled with a relatively small sample size, limits the generalizability of its findings. The short follow-up period of 6 months may not capture long-term relapse, and the methodology lacks details on randomization and specific statistical power.

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Recommendation: Accept with minor revisions

Detailed Reviewer's Report

1. **Study Design and Generalizability:** The study is a retrospective, single-center study. While it provides valuable data from a specific clinical setting, the findings may not be universally applicable due to potential variations in surgical techniques, patient populations, and post-operative protocols across different centers. The retrospective nature also means that data collection was not prospectively planned, which could introduce biases.
2. **Sample Size:** The study included 30 participants. While this number allowed for statistical significance in many horizontal parameters, it is a relatively small sample for a surgical outcomes study. A larger sample size would strengthen the statistical power and generalizability of the findings. The manuscript does not explicitly mention a power analysis being conducted to determine or justify the sample size.
3. **Follow-up Period:** The relapse rates were evaluated after 6 months (late post-operative, T2). While this provides immediate stability data, relapse in orthognathic surgery can occur over longer periods. A longer follow-up period (e.g., 1-2 years or more) would offer a more comprehensive understanding of long-term stability and relapse trends.
4. **Randomization:** The manuscript does not describe any randomization process. As a retrospective study collecting existing patient records, true randomization of participants into different treatment groups would not be applicable. The term "randomized" is not used in the "Patients and Methods" section when describing how participants were selected or grouped.
5. **Statistical Analysis Details:** While paired t-tests were used for parameter comparisons at different time intervals, and SPSS version 17 was utilized, the specific statistical significance values (p-values) are not consistently presented for all reported findings within the results text, although some are noted as "statistically significant". Providing more detailed statistical outputs would enhance the transparency and reproducibility of the results.
6. **Limited Vertical Changes Data:** The study states that only 3 out of 15 vertical hard tissue parameters and only 1 out of 9 vertical soft tissue parameters were statistically significant. While this finding is presented, a deeper discussion or analysis of why vertical changes were less significant, or their clinical implications, could be beneficial.
7. **Specifics of Surgical Technique:** The discussion mentions that "differences in the Bilateral Sagittal Split Osteotomy surgical technique... is used in various centres" and that it "depends on the surgeons technique". However, the manuscript only states that all patients "underwent an average 4 months of presurgical orthodontics phase" and the surgery was performed "under same surgeon". More detailed information on the specific surgical technique employed (e.g., type of osteotomy cut, fixation method, specific intraoperative condylar positioning protocols) would enhance the reproducibility and comparability of the study