Brazilian Dental Science

Subject: [BDS] Editor Decision

Dear Nathalie Cristina Contento-Fierro, Eliam Cielo Zúñiga-Mayhua, Jorge Alonso Borda-Bizaga, João Felipe Besegato, María Soledad Peñaherrera Manosalvas, Cristian Fernando Sanchez-Puetate, Wilfredo Escalante:

Your submission Microshear Bond Strength of CAD-CAM glass-ceramic resins cemented with fluir or pre-heated resin composites and different adhesive strategies to Brazilian Dental Science, has been revised and according to reviewers' comments, there are questions to be addressed and/or points to be clarified/corrected.
Please answer the reviewers considerations point-by-point in a separate document and also please make all the corrections in the text highlighted in yellow.

Deadline: 30 days

Thank you for considering Brazilian Dental Science for publishing your research.
We are looking forward the revised version of you manuscript.

Sincerely,

Reviewer B:
Recommendation: Revisions Required

Questionnaire

Does the manuscript contain new and significant information to justify publication?*

No

Brazilian Dental Science

Does the Abstract (Summary) clearly and accurately describe the content of the article?

Yes

Is the problem significant and concisely stated?

No

Are the methods or research design described comprehensively? Is the statistical analysis adequate?

No

Are the interpretations and conclusions justified by the results?

Yes

Is adequate reference made to other work in the field?

Yes

Is the language acceptable?

No

Manuscript Structure

Length of article is:*

Adequate

Number of tables is:

Adequate

Brazilian Dental Science

Number of figures is:

Adequate

Please state any conflict(s) of interest that you have in relation to the review of this paper (state "none" if this is not applicable).

None.

Rating

Interest*

Average

Quality

Average

Originality

Below Average

Overall

Average

Comments

Comments to the Author

The manuscript entitled "Microshear Bond Strength of CAD-CAM Glass-Ceramic Resins Cemented with Fluid or Pre-Heated Resin Composites and Different Adhesive Strategies" addresses a relevant topic in dental materials research. However, substantial corrections and clarifications are required before the manuscript can be considered for publication.
Overall, the manuscript requires extensive English language revision. Several spelling and terminology errors are present, including in the title ("fluir"), the

introduction ("inlfuence"), and the Materials and Methods section (e.g., ENA HRI "Esmalte" Plus).

Abstract

1. The term "traditional cementation" is unclear. The authors should define precisely what is meant, particularly given the wide range of cementation materials and protocols currently available.
2. The presentation of the results is partially misleading. No statistically significant differences were observed among the Monobond N groups when not associated with adhesive application.
3. Please consider removing the phrase "including those with preheated resin and Monobond N primer with fluid resin".

Introduction

1. The classification of the tested material is inaccurate. The material is a CAD-CAM resin composite block or at most as a hybrid material, not a glass-ceramic. Proper nomenclature and references are required.
2. The statement that achieving reliable adhesion to CAD-CAM resin blocks is a challenge requires clarification and supporting evidence.
3. Hydrofluoric acid is mainly indicated for glass-ceramics etching, not for resin composite materials.
4. Please standardize terminology throughout the manuscript, using either "adhesive" or "primer" consistently.
5. The reference used to support the superiority of conventional resin cements over self-adhesive cements is based on fiber post cementation. This is not appropriate for the materials and indications tested. A more relevant reference should be used.
6. Overall, the introduction lacks clarity and logical flow. The research gap is not clearly defined. The authors should explicitly state what remains unexplored in the literature and why the present study is clinically and scientifically relevant.

Materials and Methods

1. Please specify the solution used in the ultrasonic bath for specimen cleaning.
2. The rationale for the selected sample size is not provided. A power analysis is required, or at least a justification for the chosen sample size.
3. Important procedural details are missing. Statements such as "according to the manufacturer" are insufficient. The authors should specify: application time of silanes and adhesives; whether the adhesive were light-cured prior to cementation and light-curing duration and curing unit specifications.
4. Was the entire syringe of resin composite heated? How long elapsed between

removal from the heating device and cementation? This is critical, as previous studies demonstrate a rapid temperature decrease after heating (50% after 2 minutes).
5. Please clarify the source of the stated "cementation guidelines."
6. Standardize the term "flowable resin composite" instead of "fluid."
7. The filler content of the resin composites (% weight or volume) should be reported, as filler loading may influence thermal behavior and bonding performance.
8. The test performed is a shear bond strength test, not microshear. Microshear testing requires an interfacial area smaller than 1 mm2. The authors should justify the use of a macro shear test, particularly given the recognized advantages of microshear methods. Additionally, the height of the cement/resin cylinders and confirmation of complete light-curing should be reported.
9. Were any specimens lost during Tygon tube removal? If so, were they replaced?
10. The design of the loading applicator (e.g., chisel-shaped) should be clearly described.
11. Please indicate whether homoscedasticity was evaluated prior to performing ANOVA.
Discussion
1. The discussion lacks depth and does not adequately explore the mechanisms underlying the observed results.
2. The statement "Monobond N's combination with pre-heated resin improved bond strength" is unclear. Improved compared to which group? The results indicate similar bond strength values compared to Variolink and flowable resin composite groups.
3. The claim that Monobond N provides bond strength comparable to hydrofluoric acid etching followed by silane application applies to glass-ceramics, not resin composites.
4. Statements comparing Prosil and Monobond N are problematic. The tested material is not ceramic, and the explanation for Prosil's inferior performance is superficial and unsupported.
5. The proposed favorable interaction between Monobond N and preheated resin composite requires a clear mechanistic explanation.
6. The statement regarding compositional limitations of Variolink Esthetic LC lacks justification. The authors should explain how and why these compositional differences influence interaction with silane.
7. The failure mode paragraph is unclear and should be revised for clarity and

scientific relevance.
Conclusion
The conclusions are misleading. The groups treated with Monobond N did not demonstrate statistically different bond strength outcomes. The conclusions should be revised to accurately reflect the results.

Reviewer D:
Recommendation: Revisions Required

Questionnaire

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No

Are the methods or research design described comprehensively? Is the statistical analysis adequate?

No

Brazilian Dental Science

Are the interpretations and conclusions justified by the results?

Not Applicable

Is adequate reference made to other work in the field?

No

Is the language acceptable?

Yes

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none

Rating

Interest*

Good

Quality

Brazilian Dental Science

Poor

Originality

Average

Overall

Below Average

Comments

Comments to the Author

See the file.