Author's response to reviews

Title: Sealing versus partial caries removal in primary molars: A Randomized Clinical Trial

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Author's response to reviews: see over
To the Editor in Chief of *BMC Oral Heath*

Christopher Foote

Please find enclosed our revised manuscript, now entitled "**Sealing versus partial caries removal in primary molars: A Randomized Clinical Trial**". We have accepted the Editor’s and Reviewers’ suggestions, and they are highlighted in yellow.

**Editor:**

**The clinical procedure including clinical diagnostics should be described in greater detail**

Thank you very much for your comment. A more detailed clinical diagnoses, procedure and evaluation were added in Methods section as highlighted in the manuscript.

**The SEM section including the pictures can be omitted**

We appreciate your suggestion and the SEM section as well as the pictures were omitted from the manuscript.

**Submit a revised version of the manuscript after language corrections by a person proficient in writing scientific English**

Thank you for your comment. The manuscript underwent a language correction by a proficient in writing scientific English person. The certificate is attached in the end of this letter.

**Referee 1:**

**Title – page 1:**

The title ‘Sealing cavitated occlusal dentine caries lesion as alternative for management in primary teeth – a controlled clinical trial’ changed to ‘Sealing of cavitated occlusal dentine caries lesion as alternative management in primary teeth – a randomized clinical trial’.

We appreciate very much your suggestion> The Referee 2 also suggested a different title, so it was changed as highlighted in the manuscript.

**Abstract – page 2:**

Background: The text in the background part is describing the aim of the study. The section shall be revised to describe the background.

Thank you for your comment. A revised background was added to the abstract, as highlighted in the manuscript.

**Methods: Line 1: add ‘half’ after ‘outer’**

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Thank you for your suggestion and we added the referred word, as highlighted in the manuscript.

**Line 2-3: add no. of patients in each group.**
We added the number of patients, as highlighted in the manuscript.

**Line 4: add no. of teeth in each group for the 6 exfoliated teeth**
Thank you for your suggestion, but we omitted the SEM section in the manuscript, as suggested by the editor.

**Line 7: what does 5% stands for?**
The 5% is related to the significance set for the statistical analysis. We added (α=5%) to the manuscript, in order to make this statement more clear.

**Results: Line 1: add ‘significantly’ after showed.**
Thank you for your suggestion and we added the referred word, as highlighted in the manuscript.

**Line 2: revise the sentence ‘In X ray evaluation no signs of caries progression in all periods of assessment’ to: ‘In both groups, no caries progression was registered on the radiographic evaluations.’**
Thank you for your suggestion and we replaced the phrase, as highlighted in the manuscript.

**Conclusions: I suggest that you revise the conclusion to: ‘sealing had similar efficacy to arrest caries progression of cavitated occlusal lesions as partially excavation of the lesions. Although, the frequency of re-treatments was significantly higher in sealed lesions’.**
Thank you for your suggestion and we have rewritten the conclusion, as follows “In conclusion, although the control group has presented less restorations failures, both treatments are similar in arresting the caries progress”.

**Key Words: I suggest ‘partially excavation’ being added.**
We added the referred key-word. Thank you for your suggestion.

**Background - Page 3**
**Paragraph 1 line 1: add d after able**
Thank you for your suggestion and we added the referred letter, as highlighted in the manuscript.

**Paragraph 1 line 2: add area after stagnation**
Thank you for the suggestion and we added the referred word, as highlighted in the manuscript.

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Paragraph 1 line 4: the number for reference 3 should not be superscript
Paragraph 2 line 5: the number for reference 4 should not be superscript

Thank you for your comments, our mistakes for citation references was corrected.

Paragraph 2 line 6: add the before benefits.

Thank you for the suggestion and we added the referred word, as highlighted in the manuscript.

Paragraph 2 line 6: I suggest using other word than ‘despite’, because it does not fit in the sentence.

Thank you for the suggestion and we have re-written this sentence to make it more clear, as highlighted in the manuscript.

Paragraph 3: The sentence ‘However, to the best of our knowledge no studies have investigated this type of treatment in primary teeth’ should be revised to: to the best of our knowledge no studies have investigated sealing of cavitated lesions in the primary molars.

Thank you for your suggestion and we replaced the phrase.

Paragraph 3 line 4: could shall be changed to can

Paragraph 3 line 5: was shall be changed to is

Thank you for your suggestion and we replaced the words, as highlighted in the manuscript.

Paragraph 3 line 6: conventional restorative treatment should be changed to partial excavation and restorative treatment

Thank you for your suggestion and we replaced the sentence, as highlighted in the manuscript.

Paragraph 3 line 6: add molar before teeth

Thank you for your suggestion and we added the referred word, as highlighted in the manuscript.

You need to add the general failure rates for sealants and restorations/partially excavation in this section.

We added this information, as highlighted in the manuscript.

You need also to add hypotheses for your study and the null-hypotheses.

We added the null-hypotheses for our study, in the end of the introduction section, as follows: “The null hypothesis tested was that there is no difference in the caries progression of dentinal occlusal caries lesions treated with the application of a...
resin-based pit and fissure sealants or partial excavation and restorative treatment in primary molars”.

Methods - Page 3
Add journal no for the approval received from the ethics committee.

Thank you for your comment and this information was added, as highlighted in the manuscript.

Methods - Page 4
Line 2: You need to add the sample size calculation i.e. how many children was calculated to be needed in each group.

Thank you for your remark. As we had narrow criteria to include patients, such as cavity size and deep, it was very difficult to achieve a number that could be reliable. This could explain the long period that we have tried to enroll the participants (2007 till 2011). We did not calculate the sample size before the trial has started, but we have performed post hoc sample power calculation, as stated in Methods section, Participants and recruitment (highlighted in yellow).

Paragraph 2 line4-5: are all the lesions in the outer half of the dentin or maximally limited to the half way through the dentin?

Thank you for your comment. The lesion should reach the dentine but be maximally limited to the half way through this substrate. We added this information in order to make this statement more clear, as highlighted in the manuscript.

Paragraph 4 line 1: initials for the operator must be added
We added the initials of the operator, as highlighted in the manuscript.

Please add in the method section when you initiated and ended the study?
Thank you for your suggestion and we added the period when the study was performed.

Methods - Page 5
Paragraph 1 line 4: the normal etching time is for 30-60 sec. Is it correct that you have etched the surface for only 15 sec., and if so, please write the reason for it.

Thank you for raising this point. All clinical procedures were done according to manufacturer's instruction and the etching time recommended is 15 seconds (http://multimedia.3m.com/mws/mediawebserver?mwsId=SSS$SuH8gc7nZxtUMY_1mYtGevUge17zHvTSevTSeSSSSSSS--&fn=sb_plus_ifu_na-en_R4.pdf). Additionally to that, a etching time of 15 sec. is considered to be enough for achieving demineralization of around 1.0 to 2.0 micrometers of the dental surface, sufficient deepness to enable the hydrophilic monomers promoting a homogenous adhesion (Marquezan and Raggio, 2009, In: Dental Materials Research).

Did the children accept the application of rubber dam without any pain or did you used local anesthesia?

Thank you for your question. In our university it is mandatory that prior to rubber dam isolation, local anesthesia is applied. As it is a standard procedure, we did not

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mentioned it, but we have corrected this omission by adding the information “local anesthesia application” before “rubber dam applied” for experimental and control groups.

**Paragraph 2 line 3: change ‘removal’ to ‘removed’**

Thank you for your comment and the word was changed, as highlighted in the manuscript.

**Paragraph 2 line 5: why 15 sec. etching. Did you used the same etching time for the enamel and dentin?**

As mentioned before, all clinical procedures were done according to manufacturer’s instructions [http://multimedia.3m.com/mws/mediawebserver?mwsId=SSSSSuH8gc7nZxtUMY_1mYtGevUnq17zhTvTSevTSeSSSSS---&fn=sb_plus_ifu_na-en_R4.pdf](http://multimedia.3m.com/mws/mediawebserver?mwsId=SSSSSuH8gc7nZxtUMY_1mYtGevUnq17zhTvTSevTSeSSSSS---&fn=sb_plus_ifu_na-en_R4.pdf) and the phosphoric acid was first applied on the enamel and then on the dentin (Marquezan and Raggio, 2009, In: Dental Materials Research).

**Did the patients accept the restorative treatment without any local anesthesia?**

As mentioned before, all patients were submitted to local anesthesia and this information was added to the manuscript, as highlighted.

**Paragraph 3 line 1 and 2: you have written that ‘The children had operative dental care treatment, information regarding diet and dental caries and oral hygiene instructions provided by the researchers.’ Please revise the sentence so it is clear that you mean both groups receive the same treatments and information!**

We have re-written this sentence in relocated it in the beginning of “Intervention” section in order to make this statement more clear.

**Paragraph 4: how many evaluators were included? Did all the evaluators both clinical and radiographic examinations? Please clarify it in the text. Is the intra kappa-value made for the clinical examination i.e. the marginal integrity. And if it is so, were the patients called for examination twice? And what was the interval between the examinations. Please clarify these in the paragraph. Please add also that the evaluations criteria for the clinical assessment at the follow-ups were the same for both groups. Thank you for your question and we added the information that you asked, as highlighted in the manuscript.**

**Methods - Page 6**

In the methods section following parameters shall be added:

- no. of boys and girls
- no. of 1. and 2. molars
- no. of teeth in over- and lower jaw.
- You need also to add dmfs/t in each group and the mean for dmfs/t
Thank you for your comment. The dmft was included in the material and methods section, while the information regarding no. of boys and girls, no. of 1st. and 2nd. Molars, number of teeth in upper- and lower jaw was added to the results section.

**Paragraph 1 line 1:** add ‘-’ between re and application: ‘re-application’. – Thank you for your comment and the referred changing was performed, as highlighted in the manuscript.

**Paragraph 1 line 2:** How did you make the inter kappa value? How long was the period between the assessments?

Thank you for your comment and this information was added to the manuscript, as highlighted.

**Paragraph 1 line 2:** add – between restoration and repair: restoration-repair.

Thank you for your comment and the referred changing was performed, as highlighted in the manuscript.

**Did the examiners use magnification loops for the radiographic scorings?** – The examiners did not use magnification loops for the radiographic scorings. This information was add to the manuscript, as highlighted.

**Paragraph 2 line 1:** you wrote that you used ‘Fisher exact test in each group’. You can change the sentence to: ‘Fisher exact test was used for analyzing the statistical differences in clinical retention and radiographic changes between the groups for the three follow-up assessments.’

Thank you for your comment and the referred changing was performed, as highlighted in the manuscript.

**Paragraph 2 line 2:** Kaplan Meier was used.... Changes to: ‘the longevity of each treatment was estimated by Kaplan-Meier analyses.’

Thank you for your comment and the referred changing was performed, as highlighted in the manuscript.

**Paragraph 3:** Remove the sentence ‘In radiographic evaluation, the proportion of cases with and without lesion progression in each group was described and the absence of caries progression was considered as success, while the presence of lesion progress was considered as failure’

Thank you for your comment and the sentence was removed.

**Paragraph 2 which starts which ‘all data....’**. You need to add the same sentence for the clinical evaluations too.

This sentence is written for both analyses, clinical and radiographic.

**Results - Page 7**

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The sentence ‘A CONSORT flow diagram (Figure 1) shows: number of children, number of sealants, number of restorations and the presence or absence of them at the three evaluation times.’ should be revised to ‘A CONSORT flow diagram (Figure 1) shows: number of children, number of sealants and restorations, number of presence or absence of patients at the three evaluation times’.

Thank you for your suggestion and the referred changing was performed, as highlighted in the manuscript.

The paragraph about drop-out ‘One tooth from the experimental group was not assessed in the 6 months and another tooth was not accessed in the 12 months follow-up period because the children did not show up for the follow-up appointment, but the same children returned for the next assessment and was considered part of research’ is suggested to be revised to: After 18 months, only 2 drop-outs in the control group is registered. However, two children in the experimental group did not show up at the 6-month and 12-months control examinations but were examined at the 12- and 18-month examination, respectively. Therefore, both patients were re-included in the study.

Thank you for your suggestion and the referred changing was performed, as highlighted in the manuscript.

Results - Page 8
In the results part, you need to add: - Information about the distribution of gender, age, teeth, jaw and jaw side in both experimental and control group. Is the distribution equal in both groups, and please add statistical comparisons.

Thank you for your suggestion and in the results section a more detailed information regarding the characteristics variables of the sample and distribution among the groups was provided (Table 1).

Information about the radiographic depths in both groups. Is the distribution of radiographic depths equal in both groups, and please add statistical comparisons.

Thank you for your question. We did not measure in mm the depth of these lesions, but the inclusion criterion was that the lesion must be limited to the half way through dentin. In this sense, we assume that they were equally distributed. Also, the radiographic evaluation was performed without an objective measure, but with a score for progression status.

Paragraph 4: when you made the pair-wise comparison of the radiographs, did you compare the depth of the lesions, or the comparison was made on whether the lesion still was in the same zone or not.

Thank you for your question and the comparison was made on whether the lesion still was in the same zone or not, visually, without magnification.

Paragraph 4 line 2: please revise to ‘none of the lesions in both groups showed progression’.

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Thank you for your comment and the sentence was revised, as highlighted in the manuscript

**Paragraph 5:** is changed to: ‘The interface tooth/restorative material (n=3) analysis by SEM allowed the qualitative assessment of the hybrid layer formation, adhesive system tags and bacteria on affected dentine. Experimental group showed more interfacial gap areas between dentine and sealant (Figures 3), while control group (n=3) presented more homogenous hybrid layer and adhesive system tags in affected dentine (Figure 4)’. I am however not sure it is correct that you can see the bacteria in fig. 3. The marked area in the figure is most probably empty or it is an artefact due to the preparing procedure for SEM. You have to discuss the artefacts in Discussion!

Thank you for your suggestion, but we omitted the SEM section, as suggested by the editor in chief.

**Discussion - Page 8**
The section starting with ‘The caries-preventive effect of pit and fissure...... ending in page 9 with that the lesion is arrested belongs to the introduction part.

Thank you for your comment and removed this sentence from discussion and added to the introduction section, as highlighted in the manuscript

**Discussion - Page 9**
**Paragraph 1:** I believe that a total of 17 experimental treatments and 19 control treatments included in the study, is too small of a sample size to conclude as you do in paragraph 1 line 3-5: ‘For this reason, the treatment with sealants may be an effective approach for treating occlusal caries in the outer half of dentine of primary molars’. Therefore, I suggest this sentence ‘sealing may be an effective approach for treating cavitated occlusal caries with radiographic lesion penetration into the outer half of the dentine in primary molars, however, the results should be taken with caution because the sample size is limited in both experimental and control group’. You need also to explain why you think that there is no progression even though you have 35% totally/partly lost retention of the sealants.

Thank you for your comment and the sentence was revised, as highlighted in the manuscript

**Paragraph 1 line 6-8:** the sentence ‘However, higher amount of dental tissue is removed with conventional restorative treatment, and it should be considered before the clinician chooses which technique should be performed’ can be changed to: ‘there is a risk of removing sound tooth substance, when a tooth is treated by a restorative approach, while, the procedure for sealing is much less invasive’.

Thank you for your comment and the sentence was revised, as highlighted in the manuscript

**Paragraph 1 line 11:** add also that the sealing can be used as dilatory treatment in patient with less cooperation’.
We completely agree with you, and we have stated that “For this reason, sealing caries lesions in primary molars might be beneficial in treating non-cooperative children.”

**Paragraph 2 line 1-2:** delete the ‘association’ and replace it with ‘approach’.

Thank you for your suggestion and the referred changing was performed, as highlighted in the manuscript.

**Paragraph 2 line 2-4:** I agree with your conclusion that using adhesive system may decrease micro-leakage and may enhance the retention and longevity. But I do not agree in your conclusion that the retention is going to better in case of contamination of the surface with saliva. Please revise the sentence.

Thank you for your comment. In fact, the papers 21 to 26 support this discussion part of enhancing retention and longevity. We have removed the contamination with saliva part, because we do agree with you.

**Paragraph 2 line 5-8:** please add information about the retention rate of the sealant in your study in comparison with other studies. Studies have shown that the annual failure rate for the retention of sealants is 5-10%. The results of your study show that the failure rate for retention is 25% after 1 year and increases to 35.5% after 18 months. One reason for this could be because of the shortened etching time (15%) with phosphoric acid. Studies have also shown that prolonged etching time is needed in the primary teeth in comparison to the permanent teeth. Therefore, I suggest that you revise this paragraph.

Thank you for your comment. We have added the sealants retention rate for primary molars in the introduction section of the manuscript and a sealant retention rate of 61% to 88% after 2 and 3 years of assessment in primary teeth (Feigal et al., 2203; Ram et al., 2005; Borges et al., 2012). We partially disagree that the failure rate found in our study may be due to shortened etching time (15 sec) with phosphoric acid. The aim of using acid should be to demineralize around 2 micrometers, sufficient to enable the hydrophilic monomers to permeate this depth completely and perfectly, thus promoting a homogenous adhesion. With 37% phosphoric acid as the etching agent, an application time of 15 seconds is sufficient for achieving demineralization of around 1.0 to 2.0 micrometers. For dentine, a even more shortened etching time is recommended (7-10 sec). The ideal hybrid layer should be thick enough to allow the mechanical misalignment of the adhesive around the exposed collagen fibrils, but the demineralization zone must not be excessively deep. Furthermore, the collagen fibrils exposed in the portion of demineralized dentin allow nanoleakage, creating zones susceptible to hydrolytic and enzymatic degradation with the passage of time, compromising the longevity of the restoration (Sano et al., 1995; Pashley et al., 2004; Hashimoto et al., 2000b). The discrepancy between the demineralization zone and that of resinous monomer penetration may result in low bond strength values for primary tooth dentin (Burrow et al., 2002; Uekusa et al., 2006) due to their greater reactivity to acid etching (Nör et al., 1996; 1997). In this sense, a reduction in etching time (Sardella et al., 2005) and the use of weaker acids have been proposed for primary tooth dentin.
dentinal substrate (Nör et al., 1996). Thus, in primary dentin, an etching time of between 7-10 seconds with 37% phosphoric acid is encouraged, and the acid should therefore first be applied on the enamel and then on the dentin, protocol followed in the present investigation.

**Paragraph 3:** I don’t understand the sentence: ‘In our study, the teeth that had partial loss of the material had the occlusal surface resealed. In the very first planning of the study, the authors aimed to do the patients’ follow-up with clinical failure, without repairing the sealant, in order to evaluate if the outcome of lesion progression or arrestment is depending on sealant reapplication in cases of material’s partial or total loss.’ Please revise the sentence and it is recommended to divide the sentence into two or three sentences.

Thank you for your comment and the phrase was revised, as follows: “In our study, the teeth that had partial loss of the material had the occlusal surface re-sealed. The re-treatment was performed due to Ethical reasons; however as there were no cases of caries progression, these teeth were considered in subsequent radiograph evaluations”.

**Paragraph 3 line 5:** change ‘reseal’ to ‘re-seal’ and change ‘the teeth’ to ‘the surface’

Thank you for your suggestion and as the phrase was revised, the referred words were removed from the manuscript.

**Discussion - Page 10**
**Paragraph 1 line 2:** delete ‘still’.

Thank you for your suggestion and the word was removed, as highlighted in the manuscript.

**Paragraph 1 line 5:** replace ‘avoid’ with ‘postpone and even avoid’

Thank you for your suggestion and the sentence was revised, as highlighted in the manuscript.

**Paragraph 1 line 8:** add reference after invasive approach. I suggest Qvist V 2008.

Thanks for the comment. The idea of this sentence belongs to the first cited reference, as stated at the beginning of this phrase (Bakhshandeh et al. [11]).

**Paragraph 3:** you need to add that you cannot make a general conclusion on your SEM results due to the limited number of teeth.

**Paragraph 4:** please revise. This part is difficult to understand.

Thank you for your suggestion, but we omitted the SEM section, as suggested by the editor.

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Discussion - Page 11
Line 2-3: replace ‘caries arrestment’ to ‘arrested lesions’.

Thank you for your suggestion and the sentence was revised, as highlighted in the manuscript.

The discussion section needs to include some of the limitations and/or weaknesses (if there is) in the study.
Thank you for your comment and we have included the limitations of our study.

Table 1 and 2
It will be much better if you combine Table 1 and 2 in one table which include both the clinical and radiographical evaluations in each follow-up period.

Thank you for your suggestion and we combined clinical and radiograph evaluations in one table (table 2).

It will also be good to have a table showing the distributions of radiographic extension of the lesions in each group and the frequency of re-sealed lesions during the three follow-ups.

As mentioned before, we did not measure the caries extension in radiograph examination. We have tried to combine the results in table 2, with all the information needed.

It could be interesting to have a table which show the clinical and the radiographical assessments at the baseline.

As teeth had the same baseline before being randomized for the two groups, we think that this is not necessary to be shown in a table.

Figure1
The consort flow diagram is not complete. Please use the original diagram and add all the needed information. And also add SEM teeth.

Thank you for your suggestion and we followed the Consort’s diagram, as suggested. The SEM analysis was omitted.

In the text box for inclusion criteria: change ‘half’ to ‘health’

Thank you for your suggestion and we have changed the referred word.

Change ‘lesion with opening not wider than.....’: to ‘the cavity should not be wider than 3 mm in diameter in enamel’

Thank you for your suggestion and we have changed the referred phrase.

In the box for control group change the ‘restorative treatment’ to ‘partial excavation and resin restoration’

Thank you for your suggestion and we have changed the referred phrase.

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Figure 2
Please add the p-value in the figure

Thank you for your comment and we added the p-value to the figure legend

Change the ‘control group’ to ‘partial excavation and resin restoration’ and change the ‘experimental group’ to ‘sealant’

Thank you for your comment and we made the changes in the graph as suggested

Text for the figure??????

Thank you for your comment and the text for the figure is located after the references and before the tables section.

Figure 3
3a) good image. However, I don’t think that the arrow shows bacteria in this area. I rather think that this area is empty or it is an artefact from the preparing procedure.

3b) I will suggest that you mark in image 3a in which area image 3b is taken from. It will be preferable if you also could replace it with an image showing bacterial in dentin as you have in figure b.

Figure 4
4a) This is a good image. However, I will suggest that you replace it with the same image but also showing the enamel area.
4b) I will suggest that you mark in image 4a in which area image 4b is taken from.

I will also suggest that you use same magnification size for both figure 3a and 4a and also for 3b and 4b

Thank you for all your suggestions regarding the images, but we have to omit the SEM section, as suggested by the editor.

Reviewer 2

The authors performed a study regarding an important issue, questioning a century of conventional caries treatment by excavation and restoration. Instead, they propose, in line with a growing body of evidence, less invasive or, in their case, micro-invasive treatment via sealing. Whilst the study is of great interest, it has weakness, which are – unfortunately-highlighted by the manuscript.

Thank you for your comments. We have tried to enhance the quality of our paper.

Major compulsory: - Abstract:
Your “background” is very short, and I am not really happy with talking about “pit and fissure sealants” (since they are plainly resin sealants, conventionally used for pit and fissure sealing, but also capable of caries sealing, as shown by your and other studies).

We have completely changed the background at the abstract.

**Within the manuscript and throughout the paper, there are several linguistic problems: best to thoroughly revise with a native speaker!**

We sent the manuscript to be revised by a native speaker.

**Aims: This is very confusing in general: What was your main hypothesis (what did you build your sample size calculation on): Caries arrest? Failure? Please specify and correct throughout the manuscript.**

Thank you for your comment. Our main hypothesis was that the sealant would arrest the caries lesions. Nevertheless, we evaluated also the failure for both treatments. We have tried to make it more clear throughout the manuscript.

**Similarly, you mention “performance” – this could be everything.**

Thank you for your comment. In this part, we mention as "clinical performance", in comparison to RX arrestment performance. In order to make the sentence more clear, we changed the word “performance” to “survival”.

**Introduction**

There is one study investigating sealing of primary molars (Borges et al. 2012). However, yours is different – so this is okay, just mention it!

We have mention the Borges et al. reference in introduction section, and also the differences among them.

**Again, what is your aim: Efficacy of treatments regarding arrest or longevity?**

We have changed our aim to “The null hypothesis tested was that there is no difference in the caries progression of dentinal occlusal caries lesions treated with the application of a resin-based pit and fissure sealants or partial excavation and restorative treatment in primary molars”.

**Methods**

You performed partial excavation: This should be explained in far more detail – what were your criteria, when did you stop?

Thank you for your comment. We have detailed the criterion to stop dentin caries removal.

**You never mentioned if teeth were symptomatic or sensitive prior treatment: This is crucial information!**
Thank you for your comment. We completely agree with you. All teeth have no history of pain prior to treatment.

**How did you decide which teeth to analyse ex vivo?**

In fact, we have collected the teeth that exfoliated during our study. The patients brought the teeth for us.

**Your SEM –analysis seems crude regarding both your methods and your results: You extensively treated the teeth, then dried them, and then expected to analyse the dentin? Your images confirm this – since I cannot see anything new here, you might even omit this (your study is sufficient with only the clinical results).**

Thank you for your comment. The Editor also wanted us to omit this part.

**Please revise your statistics part. It is confusing.**

We have rewritten this part, as highlighted in the manuscript.

**Why did you not stratify during randomization ? Please explain.**

We have randomized by patient, and only one tooth per patient. In this sense, we assumed that there was no important factor to stratify that could influence our results.

**Results:**

Please revise your language.

“Difference” between what and regarding what?: What was your aim, what variables did you analyse, what did you compare - Structure your study and your results in a way allowing the reader to clearly follow your design, performance and evaluation of the study!

Thank you. We have rewritten the results section, with reviewer 1 and your comments.

**Why did you perform both Exact- and log-rank test on the same (survival) data?**

We performed log-rank test in survival data in order to graphically show the results. We agree with you that it would be not necessary to perform both tests for the same data.

**Discussion-Conclusions**

**The existing review re caries sealing involves studies sealing dentin lesion as well (Griffin et al. 2008).**

**Your cited reviews regarding partial excavation are outdated, please update.**
We have cited the systematic review as follows, with the 2013 update:


**Minor essentials**

**Title:** Maybe mention treatment groups (sealing versus partial caries removal in primary molars: An RCT) etc?

Thank you for your suggestion. The title was changed as suggested.

**In summary,**

The research question is viable, but hypotheses should be stated and followed more thoroughly.

Thank you for your comment. We have rewritten the hypotheses.

The methods seem sound, but require better explanations. SEM methods are questionable.

Thank you for your comment. We have tried to enhance the methods section, explaining in details some points that were not clear. We hope this is better now.

The data is sound, but statistical evaluation should be revised. SEM images are somehow superfluous.

We have revised the statistical analysis and also removed the SEM section.

The paper adheres to standards (Consort) etc.

Thank you for your comment.

The weaknesses require more discussion, and the discussion should be more balanced: What might happen if sealants are lost and patients do not return, what are risks? What are risks of excavation etc?

We add the limitations of our study, and also the benefits on performing this approach compared to conventional treatment.

The writing requires revision.

The manuscript was revised by an English native speaker, and the changes are highlighted in the text.
If there is any query regarding our manuscript or any related issues, please, do not hesitate to contact us.

Thank you for your consideration of our research.

Sincerely,

Daniela Hesse
EDITORIAL CERTIFICATE

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Sealing versus partial caries removal in primary molars: A Randomized Clinical Trial

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