

Reviewer reports and the responses to comments:

Reviewer #1 (05234011):

Scientific Quality: Grade D (Fair)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: The manuscript can be accepted in the current format with minor language polishing

-Thank you for your precious comments. We have focused on improving the language quality of the manuscript and that the work will be done in the highest possible quality. A professional English language editing company has ensured that all language related concerns are resolved.

Reviewer #2 (05989344):

Scientific Quality: Grade C (Good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Major revision

Specific Comments to Authors: A review report of the manuscript titled “Endodontic microscope-aided root canal treatment of the maxillary first molar with palatal canal variations: a case report”. In this case report authors aimed to demonstrate the presence of two separate root canals in a palatal root of the maxillary first molar. They concluded that root canal variations can be effectively identified and treated with endodontic microscope and CBCT assistance. Here are my concerns, questions and recommendations:

-Thank you for your precious comments. We have added some data as necessary and hope those would clarify your concerns.

1. From the images (Figure 1F, Figure 2A etc) I identified the existence of MB2, however authors mentioned that it was not exist.

-Thank you for this important suggestion and I agree. In this case report, MB2 existed in mesiobuccal root and had been obturated during treatment. We have revised the manuscript and figures. Both CBCT and intraoral photographs show that MB2 was tightly obturated (Figure 1-3).

2. Which kind of filling materials (siller) was used with the gutta-percha for obturation of root canals?

-Thank you for this important suggestion. We used AH Plus root canal sealer (Dentsply Detrey GmbH, Konstanz, Germany) as the filling material. To clarify the procedure, we added the following sentences in the Treatment: “Finally, the root canals of the MB, MB2, DB, and DP were obturated by injectable thermoplasticized gutta-percha technique (B&L-beta Gutta Percha Heating System, Gyeonggi-do, Korea) with AH Plus root canal sealer (Dentsply Detrey GmbH, Konstanz, Germany) (Fig. 1d).”

3. Please mention the magnification mode of the microscope which was used to detect and treat the canals.

-Thank you for your kind comment. In this case report, the microscope was used in a

magnification mode of 10x to 30x during treatment. We added the following sentences in the Treatment: “All treatment procedures were performed with an endodontic microscope with 10x to 30x magnification.”

4. Line 191-191: Two separate root canals were detected in a single palatal root, which indicated a type IV morphology. Is it Vertucci classification?

-Thank you for your important suggestion. The root canal system of the right maxillary first molar was classified based on Vertucci classification. The sentence has been modified to “Two separate canals were detected in a single palatal root, which indicated a type IV morphology (Vertucci classification).”

5. Authors should discuss which is the most common root canal system observe for maxillary molars.

-Thank you for this precious comment. We added the sentences in Discussion: “The most common root canal system of maxillary first molars was three roots with four canals^[12]. The DB and palatal roots of maxillary first molars usually have only one root canal, while the MB root has two or more canals system^[13,14]. MB2 canals are detected in 30%-95% individuals in different populations^[15,16].”

Tzeng LT, Chang MC, Chang SH, et al. Analysis of root canal system of maxillary first and second molars and their correlations by cone beam computed tomography. J Formos Med Assoc. 2020;119(5):968-73.

Kato A, Inagaki K, Utsumi M, et al. Micro-computed tomography analysis of the relationship between root canal number and root concavity in maxillary first and second molars in a Japanese population. Odontology. 2021;109(1):193-200.

Martins JNR, Marques D, Silva EJNL, et al. Second mesiobuccal root canal in maxillary molars-A systematic review and meta-analysis of prevalence studies using cone beam computed tomography. Arch Oral Biol. 2020;113:104589.

6.I recommend the following article for Discussion: Shetty, H., Shetty, S., Kakade, A. et al. Three-dimensional semi-automated volumetric assessment of the pulp space of teeth following regenerative dental procedures. Sci Rep 11, 21914 (2021). <https://doi.org/10.1038/s41598-021-01489-8>

-Thank you for your important suggestion. We have added the literature as a reference. We also added the sentence in Discussion: “Shetty et al.^[35] recently found that CBCT showed potential application in regenerative endodontic procedures”

Shetty H, Shetty S, Kakade A, et al. Three-dimensional semi-automated volumetric assessment of the pulp space of teeth following regenerative dental procedures. Scientific Reports. 2021;11(1):21914.

Reviewer #3 (05234412):

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (High priority)

Specific Comments to Authors: Language could be better

-Thank you for your positive comments. We have focused on improving the language quality of the manuscript and that the work will be done in the highest possible quality. A professional English language editing company has ensured that all language related concerns are resolved.

Reviewer #4 (03604107):

Scientific Quality: Grade B (Very good)

Language Quality: Grade B (Minor language polishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: It is a very good paper and the language is fine, I have nevertheless some formal suggestions: --- top long for a case report; too many references. In that case, please add to the actual title "...and a review of literature". This will increase the value of the paper --- too many sections / subheadings, that are not conform with general norms for writing a case report. Please regroup as: "Introduction - Case description - Discussion - Conclusion"

-We appreciate your positive comments. We addressed your comments as below.

1. top long for a case report; too many references. In that case, please add to the actual title "...and a review of literature". This will increase the value of the paper

-Thank you for this important suggestion and I agree. However, according to the Guidelines of the journal, "the title should be no more than 18 words", we had to give up on the title modification.

2. too many sections / subheadings, that are not conform with general norms for writing a case report. Please regroup as: "Introduction - Case description - Discussion - Conclusion"

-Thank you for this important suggestion. The sections/subheadings were prepared according to the Format Guidelines of this journal. Hope you will understand.

Reviewer #5 (05755592):

Scientific Quality: Grade E (Do not publish)

Language Quality: Grade B (Minor language polishing)

Conclusion: Rejection

Specific Comments to Authors: Details comments shared with editor.

-Thank you for your precious comments. We have added some data as necessary and hope those would clarify your concerns.

We have improved the language quality of the manuscript. For the comment "1 month follow up is too less", we asked the patient to re-examine after 9 months, which showed that the tooth was clinically asymptomatic and radiographically sound (Fig. 4c, d).