

Correspondence: Application of CAD-CAM for Fabrication of Metal-free Band and Loop Space Maintainer

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Dear Editor,

This is regarding the case report titled-“Application of CAD-CAM for Fabrication of Metal-Free Band and Loop Space Maintainer” by Soni HK in Journal of Clinical and Diagnostic Research [1].

The author has adequately summarised the entire case. She has used a novel approach for fabrication of most commonly used space maintainers. Also, the advantage of use of new material over the conventional metal based space maintainers has been described. The comparison of Fibre Reinforced Composite Resin (FRCR) space maintainer with the use of this unique and new approach has been explained.

However, the title of the case does not specify the area of focus, i.e., the space maintainer fabricated is an alternative to band and loop type of space maintainer because the new approach lacks the use of band in it [1].

The author has stated that maximum amount of space loss occurs in the first six months post extraction with reference and literature also states the same [2,3].

However, the impression has been made seven days post extraction and the author has not mentioned the exact duration after which cementation of the space maintainer was done.

The author mentioned that gingival shade was added to the appliance to make it more aesthetically pleasing. However, there are specific guidelines for selection of appropriate gingival shade and the author has not quoted any reference for the same [4].

Use of phosphoric acid has been done for adequate etching. However, the percentage of acid used plays an important role especially in primary teeth [5].

The chief complaint with respect to the tooth number mentioned is upper right posterior region of the jaw (tooth number mentioned as #54). However, the radiograph in the article depicts maxillary left posterior region of the jaw. Pictures does not correlate with the chief complaint. Mounting of the cast, is in contrast with the tooth undergoing extraction requiring space maintainer.

In references, the bibliography number 3 has not cited the authors' name completely. It is: Richardson ME. The relationship between the relative amount of space present in the deciduous dental arch and the rate and degree of space closure subsequent to the extraction of the deciduous molar. Dent Pract (Bristol). 1965;16:111-18.

Informed consent whether signed by the parent/guardian has not been mentioned. Assent obtained from the child is not mentioned [6].

REFERENCES

- [1] Soni HK. Application of CAD-CAM for Fabrication of metal-free band and loop space maintainer. J Clin Diagn Res. 2017;11(2): ZD14-ZD16.
- [2] Richardson ME. The relationship between the relative amount of space present in the deciduous dental arch and the rate and degree of space closure subsequent to the extraction of the deciduous molar. Dent Pract (Bristol). 1965;16:111-18.

- [3] Dean J, Avery DR, McDonald RE. McDonald and Avery's dentistry for the child and adolescent. 9th ed. London: Elsevier Health Sciences, 2010; 553-58.
- [4] Bhat V, Prasad DK, Sood S, Bhat A. Role of colors in prosthodontics: Application of color science in restorative dentistry. Indian J Dent Res. 2011;22:804-09.
- [5] Kakaboura A, Papagiannoulis L. Bonding of resinous materials on primary enamel. Dent Hard Tissues Bond. 2005;35-51.
- [6] Assent and consent requirements for children. Available from: <https://kb.wisc.edu/hsirbs/page.php?id=27037>

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AUTHOR'S REPLY

The space maintainer can be used as an alternative to band and loop space maintainer. The band component has only been done to avoid the problems of metal allergy and corrosion. Also, the use of CAD-CAM helps in proper adaptation of the space maintainer, thereby reducing the chances of an ill fitting appliance.

The impression was made after the extraction of the tooth, as the design of the space maintainer advocates proper contour and adaptation of the space maintainer on the abutment tooth. Otherwise, the space maintainer would not fit in properly. The space maintainer was cemented on the alternate day of the impression. That is nine days post extraction. There might have been slight space loss in the interim time from extraction to cementation of the appliance.

The gingival shade was added by the Illusion laboratory considering the intraoral photographs of the patient which was provided to the technician along with proper design of the appliance. We could not follow the specific guidelines for the selection.

The laboratory was situated at Mumbai and since the space maintainer was the first of its kind, we do acknowledge that there

were certain problems which had to be addressed and would be taken care of in the forthcoming cases.

A 32% phosphoric acid was used (Scotchbond) from 3M ESPE for 15 seconds for etching as recommended by Gwinnett AJ and Garcia-Godoy F [1].

The radiograph and the cast have been reverted as mirror images and have been rotated, therefore it is appearing to be of the opposite side. The cast can be clearly seen to be of the same patient as all the teeth in the arch in the intraoral photograph are completely co-ordinating with those on the cast, there is a clear indication of them being of the same patient.

The parent consent was taken prior to the treatment. I would like to apologise for the mistake in citing the incomplete authors name. It should have been- Richardson ME [2].

REFERENCES

- [1] Gwinnett AJ, Garcia-Godoy F. Effect of etching time and acid concentration on shear bond strength to primary tooth enamel. *Am J Dent.* 1992;5(5):237-39.
- [2] Richardson ME. The relationship between the relative amount of space present in the deciduous dental arch and the rate and degree of space closure subsequent to the extraction of the deciduous molar. *Dent Pract (Bristol).* 1965;16:111-18.