

Chairside Fabrication of Biomimetic Riding Pontic: A Case Report

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ABSTRACT

Introduction: This article describes an efficient chairside method for immediate fabrication of an esthetically superior pontic, compared to an acrylic denture tooth, prior to extraction of a tooth due to any underlying reason.

Discussion: Taking an impression of the patient's own individual tooth permits the orthodontist to create a pontic with precise anatomy, size, and esthetics. The total time for the procedure of pontic assembly is less than a few minutes.

Conclusion: This small chairside procedure of pontic fabrication can go a long way in delivering esthetics as well in building up the confidence of the patient and that too in a very short time period.

Clinical significance: Simple, easy, cost effective, and time-saving chairside procedure.

Keywords: Chairside, Orthodontic, Resin, Riding pontic.

Journal of Contemporary Dentistry (2019): 10.5005/jp-journals-10031-1251

INTRODUCTION

Riding pontics are acrylic teeth that act as temporary prosthesis during fixed orthodontic treatment in a patient with missing tooth, especially in the smile zone.¹ This article describes an efficient chairside method for immediate fabrication of an esthetically superior pontic, compared to an acrylic denture tooth, prior to the extraction of a tooth due to any underlying reason (Fig. 1).

PROCEDURE

- Before extraction of the tooth, take a putty index using addition silicone putty impression material.
- After obtaining the putty index, retrieve it from the oral cavity and fill the impression of the central incisor with an appropriate shade of composite resin, to replicate the labial surface. Keep adding the layers to make it approximately 3–4-mm thick.
- Light cure the pontic, 30 seconds for each increment, remove it from the impression, and polish it using routine composite polishing burs.²
- Roughen the area on the pontic corresponding to the bracket base using a bur and attach the bracket at the desired position, there is no need etch the pontic surface. Light cure the bracket for 40 seconds.
- Contour the lingual, interproximal, and gingival surfaces of the pontic and ligate it to the arch wire.

DISCUSSION

Taking an impression of the patient's own individual tooth permits the orthodontist to create a pontic with precise anatomy, size, and esthetics.³ The total time for the procedure of pontic assembly is less than a few minutes. An impression of the teeth made inside the mouth is far superior to taking an impression of the tooth after extraction for several reasons:

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How to cite this article: Kate SR, Patni VJ. Chairside Fabrication of Biomimetic Riding Pontic: A Case Report. *J Contemp Dent* 2019;9(1):44–45.

Source of support: Nil

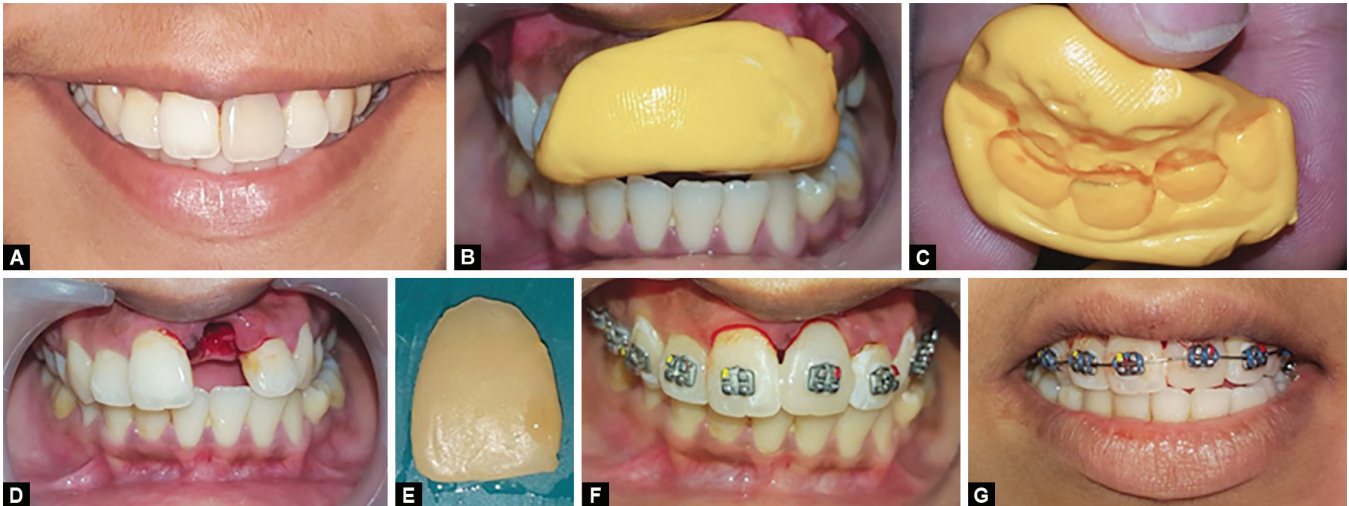
Conflict of interest: None

- An ankylosed tooth especially one with chronic non-healing periapical lesion due to trauma may fracture during extraction.
- An intraoral impression will capture the gingival margin.

If the patient presents with a lost or extracted tooth, the clinician can use an adjacent or contralateral tooth to make the impression mold. If a central incisor is missing, the adjacent central incisor should be used for exact size and shape, with minor interproximal re-contouring as needed, to improve the shape of the tooth. A single-tooth pontic will tend to rotate on a round archwire. To prevent this, the pontic is bonded labially to the adjacent tooth on the one side.⁴ This can be altered according to the case as the leveling and alignment progresses.

CONCLUSION

The strive for esthetics to be delivered at every step is an endless job in the field of orthodontics. This small chairside procedure can go a long way in delivering esthetics as well in building up the confidence of the patient.



Figs 1A to G: A 21-year-old female patient seeking for orthodontic re-treatment, presented with a discolored upper left central incisor (A), associated with chronic non-healing periapical lesion and ankylosis due to trauma. The tooth was advised for extraction due to poor prognosis. The procedure for chairside fabrication of pontic is illustrated above; (B) and (C) Putty index of the tooth before extraction is procured; (D) The tooth is extracted; (E) The pontic is fabricated in the putty index by adding layers of composite resin until its 3–4 mm thick; (F) and (G) The bracket is placed on the pontic and it is ligated into the archwire; (G) The patient after placement of pontic

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