

CASE REPORT

## Maryland Bridge: A Case Report

Tapan Kumar Giri<sup>1</sup>, Sugata Mukherjee<sup>2</sup>, Riju Das<sup>3</sup>, Swagata Deb<sup>3</sup>

<sup>1</sup>Professor & Principal, <sup>2</sup>professor and Head of the Department, <sup>3</sup>PGT, Dept. of Prosthodontics and Crown & Bridge, Dr. R. Ahmed Dental College And Hospital, Kolkata.

**Corresponding Author:** Dr. Riju Das, Post Graduate Student, Dept. of Prosthodontics and Crown & Bridge, Dr. R. Ahmed Dental College And Hospital, Kolkata,  
Email id: [dasriju2010@gmail.com](mailto:dasriju2010@gmail.com).

### Abstract

Missing teeth at a young age are often a challenge to replace. Until a mature stage is reached, definitive replacement has to be delayed. Adhesive bridges are a practical option in such cases that act as interim restoration for short to long time periods till definitive replacement can be done. These case reports demonstrate such situations. (2019, Vol. 03; Issue 01: Page 17 - 19)

**Key Words:** Maryland Bridge, Abutments, Interim restoration.

### Introduction

Replacement of missing teeth with fixed artificial ones usually involves the adjacent teeth as abutments. In young patients with young and immature teeth this treatment option is not ideal due to large pulp size and transitory nature of gingiva

(1). Treatment planning for such cases requires restorations with minimal preparation of abutments and an essentially interim or temporary nature of the restoration. Many designs have been advocated, e.g. Maryland bridges, Rochette bridges (2, 3). While these restorations have compromised retention and corresponding life spans, newer self-etch adhesive systems help to ensure that such restorations are retained for reasonably long periods of time (4).

### Case Report: 1

The following case of missing #31 and #41 in a twenty year old male patient had been unrestored for a year (Fig 1A). On clinical and radiographic examination, the teeth demonstrated gingival margins much coronal to the cemento-enamel junctions (Fig 1B). Considering the age of the patient and physical characteristics of the teeth, a conservative adhesive bridge was planned as interim restoration. Minimal preparation of the abutments (#32 and #42) was performed on the lingual surfaces only (Fig 1C). Care was taken to ensure that the preparations were not extended beyond the palato-proximal line angles on the abutments. Supra gingival chamfer finish line with long chamfer bur had been given. Parallel retentive grooves with 169L bur were made in each preparation on the surface facing the edentulous space. Impres-

sion procedures were carried out with addition silicone (Express XT, 3M ESPE, Seefeld, Germany) (Fig 1D). A metal framework with 'wings' extending onto the preparations was fabricated with soft, non-precious alloy, on which retention beads and nail heads were created to retain the veneering material in the pontic area (Fig 2A-C).

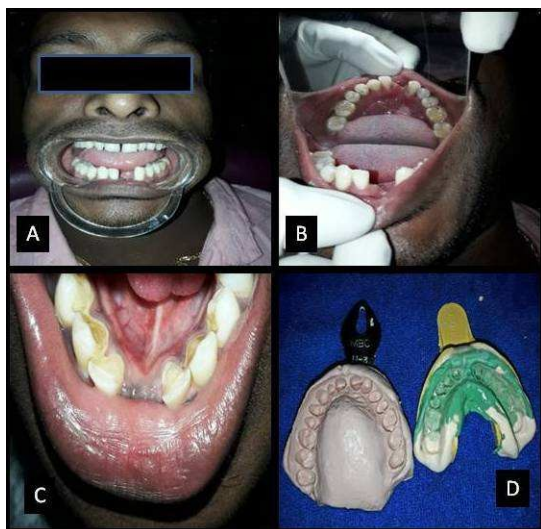


Fig 1: A- Preoperative extraoral view, B- Preoperative intraoral view, C- After teeth reduction, D- Impression.



Fig 2: A- Metal trial, B- Before crown cementation, C- After crown cementation.

## Case Report: 2

A twenty year old female patient reported with a chief complaint of missing #31 and #41 for last two years (Fig 3A). On clinical examination, the teeth demonstrated gingival margins much coronal to the cemento-enamel junctions (Fig 3B) and radi-

ographically there was large pulp chambers. Considering the age of the patient and physical characteristics of the teeth, a conservative adhesive bridge was planned as interim restoration. #32, #33, #42 and #43 were taken as abutments and minimal preparation was performed on the lingual surfaces of those teeth. Care was taken to ensure that the preparations were not extended beyond the palato-proximal line angles on the abutments. Parallel retentive grooves were made in each preparation on the surface facing the edentulous space. Impression was taken with addition silicone (Express XT, 3M ESPE, Seefeld, Germany). A metal framework with 'wings' extending onto the preparations was fabricated with soft, non-precious alloy, on which retention beads and nail heads were created to retain the veneering material in the Pontic area (Fig 3C & D).

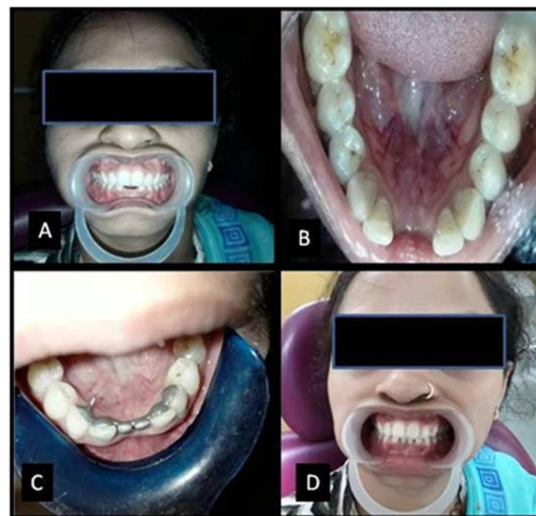


Fig 3: A- Preoperative extraoral view, B- Preoperative intraoral view, C- Metal trial, D- After prosthesis.

## Discussion

Large pulp chambers in the abutments, expected transition in the position of the gingiva and age of the patient were factors that precluded the use of conventional fixed prostheses in this case. The restoration planned was considered ideal because of its conservative nature that would allow the tooth and soft tissues to mature before a more conventional and definitive restoration to be fabricated (5). Although 74% success rate at 4 years is considered satisfactory for adhesive restorations (6, 7). The uneventful 1-year follow up in this case created much optimism regarding its tenure in service, at the end of which definitive prosthodontic treatment may be rendered. These restorations essentially remain 'long term provisional restorations' or interim replacement of missing teeth.

## Conclusion

Treatment planning compromised by patient factors may be compensated by technology of newly developed products. The self-etch universal resin cement systems are an invaluable aid to this effect.

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