

 <p>ISSN NO. 2320-5407</p>	<p>Journal Homepage: -<a href="http://www.journalijar.com">www.journalijar.com</a></p> <h2 style="text-align: center;">INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)</h2> <p style="text-align: center;">Article DOI: 10.21474/IJAR01/7860 DOI URL: <a href="http://dx.doi.org/10.21474/IJAR01/7860">http://dx.doi.org/10.21474/IJAR01/7860</a></p>	
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### RESEARCH ARTICLE

#### CORRECTION OF MARGINAL SEAL DISCREPANCY OF PORCELAIN FUSED METAL CROWN: A CASE REPORT.

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#### Manuscript Info

##### Manuscript History

Received: 10 August 2018  
Final Accepted: 12 September 2018  
Published: October 2018

#### Abstract

The marginal integrity of any restoration prevents secondary cares, microleakage, dentinal sensitivity and pulpal damage. Proper marginal seal elongates clinical life restoration. Failure to achieve proper marginal seal shortens clinical life of any restoration.

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#### Introduction:-

Marginal gap might be defined as the perpendicular measurement from the marginal surface of the restoration to the axial wall of the preparation. Marginal integrity of the crown determines its clinical longevity. Marginal failure might lead to micro leakage (as the main cause of tooth sensitivity, recurrent dental caries, and postoperative dental sensitivity).

#### Case report:

A patient by name Hafiz came to the department of Prosthodontics Government Dental College And Hospital, Srinagar with chief complaint of foul breath after restoring his mandibular first molar. On clinical examination, bluish free gingival margin was observed around the Porcelain Fused Metal Crown restoring mandibular first molar (Fig. 1)

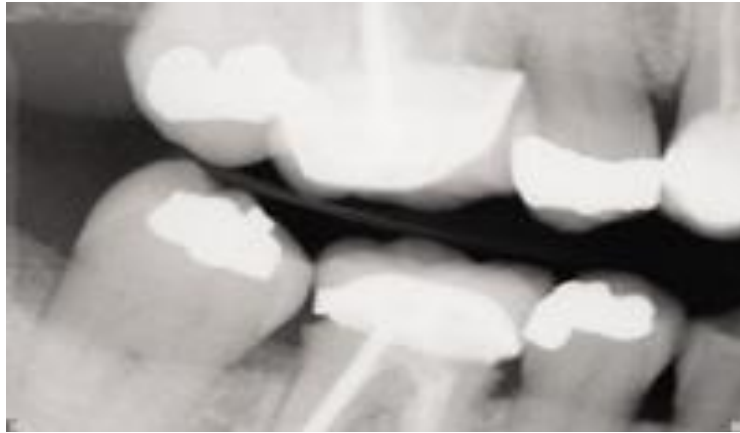


**Fig.1:-** Bluish free gingival margin

Bleeding on probing was observed. Bitewing radiograph was taken and marginal discrepancy was obvious Fig. 2

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**Fig.2:-**Bitewing radiograph showing

1. Marginal discrepancy.
2. Vertical Bone Loss .

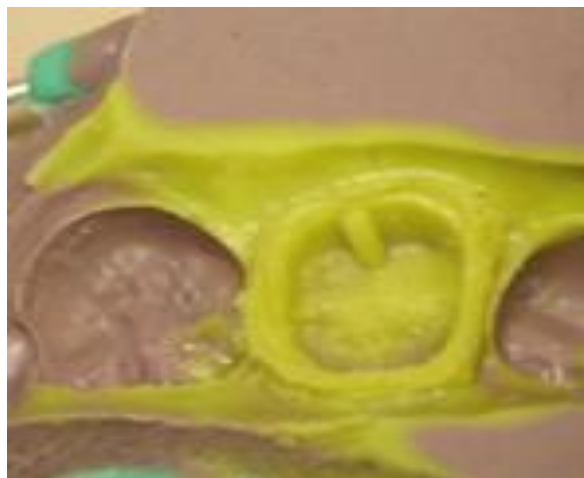
The Porcelain Fused Metal crown was removed and the abutment was reshaped and gingival retraction was done retraction cord (Fig. 3).



**Fig.3:-**After crown removal abutment was

Reshaped and then,  
Gingival retraction in gingival sulcus

Putty reline impression technique was used to make the impression of the prepared abutment (Fig. 4)



**Fig.5:-**Putty reline impression of the abutment

The Porcelain Fused Metal crown was fabricated and then, the abutment was restored with. New Bitewing radiograph was taken to evaluate the marginal integrity of the Porcelain Fused Metal crown (Fig. 6).



**Fig.6:-**Marginal discrepancy corrected

**Discussion:** Restoration of the form and function is the main objective of restorative dentistry. The dentist places restorations to seal-off the dentinal wound created by caries, trauma, or cavity preparation. Failure of a restoration to provide a tight seal leads to colonization of marginal openings by microorganisms (Branstrom and Nyborg, 1971) and subsequent pulpal disease (Brännstrom and Vojinovic, 1976). Clinicians, based on the knowledge of the aetiology of caries (Konig, 1971; and Fejerskov, 1986) and clinical experience in respect of caries, have concluded that every plaque retention site is a possible location for caries (Anusavice, 1989)

**Summary:**

Marginal integrity is an important parameter as marginal gap formation is associated with secondary caries and pulpal damage. Marginal sealing discrepancy leads to failure of any restoration. Proper marginal integrity indicates successful clinical longevity of any restoration.

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