Evaluation of complications observed in porcelain fused to metal (PFM) crowns placed at a teaching institution

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Introduction: Porcelain fused to metal crown is the most versatile variety of crown that is commonly placed worldwide.

Objective: The objective of the present study was to determine the frequency of these complications and survival of crowns cemented over a period of five years in a tertiary care hospital and also to report the survival of these crowns.

Material & Methods: A retrospective audit study was conducted in Dental clinics, Aga Khan University Hospital in which 150 PFM crowns were evaluated. All PFM crowns fulfilling the inclusion criteria were assessed both clinically and radiographically. Data was recorded in a specially designed proforma. SPSS version 22.0 was used for statistical analysis. Frequency distribution of complications was determined. Chi-square test was used to determine the association of complications of PFM crowns with patient related factors. Kaplan-Meier survival analysis was used to determine the survival of PFM crowns. Level of significance was kept at 0.05.

Results: The most common complication observed was open proximal contacts (8.7%) followed by porcelain chipping (6%), decementation (5.3%), and abutment fracture (1.3%). There was no statistically significant association of PFM crown complication with tooth wear, betel nut and opposing dentition (p-value >0.05). The overall success and survival rates of PFM crowns turned out to be 78.7 and 84.7% respectively.

Conclusion: Within the limitations of the study, it can be concluded that PFM crowns is an effective treatment modality with high success and survival rates. Since, it was a single centered study, the results should be generalized with caution.

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