Marginal bone loss around cement and screw-retained fixed implant prosthesis

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Background & Aims: Fixed implant-supported restorations are considered as the standard treatment for replacement of missing teeth. These can be either screw or cement retained. The success or failure of implant restorations depend upon amount of marginal bone loss (MBL). The present study is to determine the MBL around cement and screw-retained implant prosthesis and to determine various predictors of the MBL.

Materials & Methods: A retrospective charts review was conducted at the dental clinics, Aga Khan University Hospital, Karachi from February 2017 to June 2017 in which 104 implants restorations were evaluated using peri-apical radiographs. MBL was calculated at baseline and at 12 months and the difference was recorded on a proforma. SPSS version 21.0 was used for statistical analysis. Descriptive statistics was computed. Independent sample t-test was used to determine the difference in the MBL between the two groups (cement-retained vs. screw-retained) crowns and fixed partial dentures. Generalized estimation equation analysis (GEE) was applied to determine the predictors of MBL. Level of significance was kept at ≤0.05.

Results: There were 104 implant restorations belonging to 41 patients. There was no difference of the MBL around screw retained versus cement retained crowns. However, the distal surface of screw retained fixed partial dentures showed significantly greater MBL (p-value=0.028). Age, gender, medical status and bone grafting were found to be significant predictors of MBL.

Conclusions: There was no difference in MBL between screw and cement retained prosthesis except on the distal surfaces of screw retained fixed partial dentures. Elderly diabetic males of age >65 years along with bone grafting turned out to be strong predictors of MBL.

Biography
Muhammad Hasan Hameed has completed his BDS from Dow University of Health Sciences, Karachi, Pakistan. He is currently pursuing Fellowship in Operative Dentistry from Aga Khan University in Karachi, Pakistan. He has published more than 5 papers in reputed journals.

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