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Ten-year clinical survival rate of a zirconia based core ceramic for posterior fixed partial dentures: prospective study

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Aim: of this prospective study was to evaluate the in-service efficacy and long-term survival rate of three-unit fixed partial dentures (FPDs) made from zirconia-based core ceramic. 103 three-unit FPDs were placed in 89 patients to replace posterior single lost teeth. CAD-CAM technology was used to fabricate frameworks of the designed FPDs. The frameworks were adhesively luted to the abutment teeth. Each case was examined after 1 week of the placement, after 3 months, and then annually for 10 years. Statistical analysis was performed using Kaplan-Meier survival analysis. 77 patients with 80 FPDs attended The regular follow-up visit. The mean observatin period was 7.5 ± 1.5 years. Patient satisfaction with the restoration was evaluated using a 10-point visual analog scale (VAS).

Results: of the current study showed that several FPDs exhibited veneer chipping. Core fractrues occured in 2 FPDs. Marginal caries were noted for few FPDs which reulsted in poor marginal integrity. Only 2 patients presented reversible postoperative sensitivity. The Survival rate (still in-sevice) of the FPDs was 92%. The mean value for patient satisfaction was 9.1±1.1. The current study

Concluded: that zirconia veneered core cermaics offer a reliable treatmet option for posterior segements. Chipping and/or core fracture may be resulted, and hence the manufacturing processes must be modified in order to avoid this complicaitos.

Biography

Dr. Mohammad Albakry has completed his PhD at the age of 32 years from the prestigous uiversity of Sydney, Australia. He is a chairman, preventive dentistry, Vice-dean of the faculty of Dentisty, Najran univesriy, Head of the Biomateials Science Unit. He has published more than 12 papers in the field of biomaterials (Mechanical properties of all- cermaic dental materials). His scentific articles were published in peer-reviwed, and high impact facor reputed journals.

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