Clinical evaluation between zirconia crowns and stainless steel crowns in primary molars teeth

Introduction and Research Problem: The aim of this project is to evaluate and compare two full coronal restorations on primary posterior molars over a period of 3, 6 and 12 months in terms of restoration failure, marginal integrity, proximal contact, secondary caries, occlusion and gingival response. The restorations types are Stainless Steel Crowns (SSC) and NuSmile Zirconia Crowns (Nu/ZR).

Materials and Methods: Children attending the King Abdulaziz University, Faculty of Dentistry (KAUFD) clinics who need restorations will be screened for inclusion criteria till 120 teeth are recruited (60 teeth for SSC restorations and 60 for Nu/ZR restorations). The split-mouth technique will be used to ensure equalizing variables for both groups, each patient will have side restored with SSC and the opposite side will be restored with Nu/ZR crowns. Randomization will be done using SPSS software version 20.0 (Armonk, NY; IBM Corp.) for each age group separately with a uniform random variable generation. A simple descriptive statistics will be used for analysis and a T-Test with Wilcoxon Signed-Rank will be used. Level of significance will be set at (α = 0.05) and level of confidence at (95%).

Summary of Results: At 6\textsuperscript{th} month all samples under group Zirconia already improved while only 73.3% from SSC while the remaining samples happened to have positive changes at the 12\textsuperscript{th} month. Regarding the plaque retention also the zirconia crowns shows improve performance than SSC.

Conclusion and Recommendations: As both SSC and Zirconia crowns presented to be an excellent choice for posterior teeth restorations, however, we can conclude that zirconia crowns performed better regarding gingival response to the material of restoration and plaque retention despite its high cost.

Biography
Abdallah completed his PhD from University of Alexandria, Egypt & postdoctoral studies from the University of Illinois at Chicago 1983. He has published more than 30 papers in reputed journals and has been serving as an editorial board member of reputed journals.

mabdallah161@outlook.com

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