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Road to endodontic success: New trends with basic concepts

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The specialty of endodontics has evolved over the years like many other dental and medical specialties. The changes that have occurred in the last ten years, however, have been of great extent. Progress in any field can only be achieved by altering the old beliefs, concepts and attitude and moving forward. Successful management of root canal failures demands an understanding of the causes of failure and knowledge of the advantages and disadvantages of the various techniques. Now-a-days due to the better understanding, advancements of the theories, new generation of instruments and techniques of modern nonsurgical endodontics have made endodontics look simpler. The use of microscope, nickel-titanium rotary file systems, electronic apex locators, ultrasonics and newer obturation systems have profoundly changed the traditional endodontic practice. This lecture will outline the fundamentals of success in Endodontics, provide some of the considerations and guidelines necessary to achieve predictably successful endodontic outcome.

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In vitro evaluation of the tensile bond strength of a pre-fabricated dowel post system and commonly used core build up materials

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Introduction: The management of the extensive loss of the tooth structure requires endodontic treatment and prosthetic reconstruction. The post and core build up is required for restoring teeth to optimum health and function. The union between a post and core should provide sufficient strength to resist intraoral tensile and compressive forces.

Materials & Methods: This *in vitro* study evaluated the tensile bond strength of a pre-fabricated dowel post system and commonly used core build up materials. The study includes Group A- Glass ionomer cement-II and Group B- Silver amalgam. Carbon steel moulds were used to fabricate the post and core assemblies. Twenty post and core assemblies with two different core material and para-post number 5 were prepared. Tensometer model no KIPL-PC 2000 was used for testing the samples. A gradual force was applied to the specimen till a visible or audible evidence of the failure or inability of the specimen to withstand a greater load was shown. The modes of fracture were observed and the failure loads in Kg for samples were recorded.

Results: Results showed that all the twenty posts and core assemblies of each group showed a fracture at the post-core interface and the posts separated out cleanly from the forces. The mean failure load for glass ionomer and amalgam group was 9.85 and 51.55 kg respectively. A highly significant differences were noted among groups ($p < 0.01$) when compared statistically. Furthermore, the mean separation forces of the group A as compared to group B was found to be statistically significant ($p < 0.01$).

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