Effect of glass fiber poster combined with different resin core materials on masticatory function and inflammatory factor in GCF of patients received residual root and crown restoration

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View from specialist: It is creative, and of certain scientific and educational value.

[ABSTRACT] Objective: To study the effect of glass fiber poster combined with different resin core materials on masticatory function and inflammatory factor in GCF of patients received residual root and crown restoration. Methods: A total of 120 cases received residual root and crown restoration in our hospital from 2013.5-2014.6 were enrolled and randomly divided into three groups. A group received glass fiber poster combined with BisCem resin cement treatment, B group received glass fiber poster combined with PULPDENT dual resin cement treatment, C group received glass fiber poster combined with 3M light curing nano composite resin treatment. Then resin core material bending strength, masticatory function and inflammatory factor levels in gingival crevicular fluid were compared. Results: Resin core materials flexural strength, bite force and masticatory efficiency of A group was higher than those of group B and group C. IL-1β, PGE2, NO, CAM1, MMP2 content in gingival crevicular fluid of A group were lower than those of B group and C group; TIMP2 content was higher than that of group B and C group. Conclusion: Glass fiber poster combined with BisCem resin cement treatment is helpful to improve flexural strength and masticatory function, reduce inflammatory factors content in the gingival crevicular fluid and periodontal tissue damage. It's an ideal method in residual crown and residual root restoration.

[KEY WORDS] Residual crown and root restoration; Glass fiber post; Resin core materials; Masticatory function; Inflammatory factors