Title: Comparative evaluation of the microscopic changes at the glass fiber reinforced post-resin cement interface with silane and three different chemical pre-treatments using scanning electron microscope.

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Abstract: ***Statement of problem***: Loss of retention has been cited to be the most common cause of the failure of post-retained restoration with irreversible consequences especially when materials with different compositions are in intimate contact at the post-resin interface. The weaker adhesion at the post-resin interface may be due to lack of strong chemical bonding between resin luting agents and the polymerized epoxy matrices of fiber-reinforced posts.***Aim:*** The purpose of this study is to compare the effect of the chemicals namely silane(S), hydrogen peroxide(H2O2), hydrofluoric acid(HF), potassium permanganate(KMno4) that can enhance the adhesion at the post-resin interface and to investigate their morphologic aspect using a scanning electron microscope(SEM).***Material and Methods:*** 100 glass fiber-reinforced posts (DT light posts) were divided in four groups (n=25) namely, **Group A**: Silanization,**Group B**: Treatment with 20% vol.KMno4 followed by silanization**, Group C:** Treatment with 4%HF followed by silanization, **Group D:**Treatment with 10%H2O2 followed by silanization.These specimens were bonded with dual polymerizing resin-based luting agent (Calibra), and subjected to a shear load at a cross-head speed of 1mm/min until failure, using a universal testing machine(Instron 4467). Means and standard deviations were calculated using *analysis of variance (ANOVA)*. Further SEM analysis was done to study the characteristics of the post-resin interface.***Results:*** Dissolution of the epoxy resin matrix occured in each of the four groups except for the Group A that showed poor ultrastructural changes respectively.***Conclusion:*** Combination of chemical pre-treatments followed by silanization enhanced the bond strength at the post-adhesive interface.

Research Publications:

1.) Comparison of evaluation of the sealing ability of biodentine carried out under three different working conditions using glucose penetration method – An In-vitro stud—European Journal of molecular and clinical medicine ,2020, Volume7, Issue 7, Pages 1684-1691.

2.) Comparison of the different chemical surface treatments of a glass fiber-reinforced-post on adhesion with a resin based luting agent- an in vitro study" - Contemp Clin Dent.2016 Apr-Jun;7(2):193-7

3.) Title for ebook : "RESTORATION OF EXTENSIVELY DAMAGED TEETH." A Book through LAMBERT PUBLISHING ACADEMY(2014)

4.)BORN IMPERFECT…MADE PERFECT…Management of enamel hypoplasia using porcelain laminate veneers –Archives of Dental Research Vol. 2 Issue 1, Jan-Jun 2012

5.)A simplified clinical approach to preventive Prosthodontics–Telescopic overdenture with customized double copings -International Journal of Dental Case Reports 2011 Vol .3 Issue 3, 60-66.



Biography: A self motivated and energetic speaker, creative person with goal-oriented approach working for reputed institutions. She has represented as a team leader and master of ceremony for several continuing dental education projects and workshops. Her efforts in improving the student experience as a guide and mentor have helped her to achieve reputation for transparency and innovations. With more than 12 years experience in prosthetic and cosmetic dentistry, she is adept in maxillofacial rehabilitation, development of occlusion, corrections of TMJ, removable or implant-supported dentures. She has enormous contritubution to Indian Prosthodontic society (IPS) and an award winner for varied clinical research and digital reviews held at national and international conventions. Her research work received an excellent feedback which was acknowledged in the journal published by Elsevier. Her e-book through Lambert publishing academy held immense response internationally on Amazon. She is open to expand her services and footprint at a global level.

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