Clinical evaluation of platelet rich fibrin in direct pulp capping: A comparative study

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Aim: Aim of the present study was to comparatively evaluate the effect of combination of Platelet Rich Fibrin (PRF) and mineral trioxide aggregate with calcium hydroxide and mineral trioxide aggregate used separately as direct pulp capping agents.

Method: 45 patients who met the inclusion criteria were randomly allocated into three treatment groups (n=15). Direct pulp capping was performed using calcium hydroxide in group-1, MTA in group-2 MTA along with PRF in group-3. Clinical and radiographic evaluation was done every month for 6 months. Teeth were clinically evaluated for any color change in coronal area of tooth, status of pulp vitality, presence of periodontal inflammation, presence of sinus, swelling and mobility. Radiographic evaluation was done by measuring increase in the radiographic density below the exposure site and data obtained was statistically evaluated by ANOVA test.

Result: According to ANOVA test the difference in mean density changes among the groups was found to be significant (p=0.001). In post-op bi-group comparison radiographic density increase difference between CH and PRF+MTA was highly significant (p=0.001), between MTA and PRF+MTA group difference in radiographic density was significant (p=0.022) and between CH and MTA group difference in radiographic density was however not significant (p=0.347).

Conclusion: Within the limitation of the present study combined use of PRF and MTA can be considered as more effective direct pulp capping material than calcium hydroxide and mineral trioxide aggregate used separately.

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