Abstract:

Aim

To evaluate and compare the clinical and radiographic success of zinc oxide eugenol, metapex and endoflas as obturating materials in pulpectomy of primary teeth at 3 and 6 months follow up.

Methodology

A total of 60 carious primary molars with clinical signs and symptoms indicative of irreversible pulpitis were selected from 36 children, aged 4 to 9 years and free from any systemic disease who visited the outpatient ward of Department of Pedodontics, KSRIDSR, Tiruchengode between January 2015 till April, 2015. The teeth were selected on specific inclusion and exclusion criteria randomly divided into three groups A, B and C. The pulpectomy procedure was performed under rubber dam isolation after administration of local anaesthesia. The selected teeth were randomly obturated with zinc oxide eugenol in group A, metapex in group B and zinc oxide eugenol and endoflas as Group C. Post operative radiographs were taken immediately after obturation. All obturated teeth received an entrance restoration, followed by preformed stainless steel crown. The teeth were evaluated at 3 and 6 months respectively using clinical and radiographic criteria cited by Gupta and Das (2011) Clinical and radiographic success was scored by two well-trained pediatric dentists. Inter examiner reliability was correlated by using Cohen’s Kappa coefficient (k = 0.8).
Statistics: Statistical analysis was done using SPSS version 17.0 (Chicago: SPSS Inc) with statistical significance set at $p \leq 0.05$. Chi square test was employed for the statistical analysis.

Results and Conclusion: Zinc oxide eugenol had 100% overall success rate, followed by endoflas with 98.6% and metapex with 92.1%. Intergroup comparison of overall success was statistically significant ($p = 0.0027$). Both zinc oxide eugenol and endoflas showed 100% clinical success rate at 3 and 6 months interval. Metapex showed 100% clinical success at the 3rd month, but it declined to 89.4% in the 6th month follow up. Similarly, inter group comparisons of clinical success between the three groups was highly statistically significant at the 6th month interval ($p < 0.001$). Intra group comparison of radiographic success was highly statistically significant for metapex ($p < 0.001$) and statistically significant for the endoflas ($p = 0.045$). Inter group comparison between the three groups was statistically significant at the 3rd and 6th month interval with $p = 0.004$ and $p < 0.001$ respectively.

Key words: Zinc oxide eugenol, Metapex, Endoflas, Clinical, Radiographical