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DO WE STILL NEED TO USE FORMOCRESOL?

Shafik S M¹, Abd-Elaziz A M², Faried M M² and Wassel M O²

¹Beni Suef University, Egypt

²Ain-Shams University, Egypt

Background: Alternatives to vital pulpotomy treatment in primary teeth are being sought because of the high formaldehyde content of traditional formocresol (FC) pulpotomy medicament and the high cost of other proposed alternatives.

Aim: The aim of the study was to evaluate clinical, radiographic and histopathologic effects of sodium hypochlorite (NaOCl) and propolis pulpotomies in primary molars compared to FC pulpotomy.

Materials & Methods: One hundred and twenty teeth in 60 systemically healthy children aged 4-7 years were included in the study. Patients were randomly allocated into two groups, Group I in which 60 teeth in 30 patients received either 5% NaOCl or 1:5dilution FC using split mouth design and Group II in which 60 teeth in 30 patients received either 100% propolis pulpotomy or 1:5 dilution FC using split mouth design, all teeth were restored using stainless steel crown. Clinical and radiographic evaluations were performed at 6 and 12 months. Ten primary molars planned for extraction due to orthodontic reasons in 10 systemically

healthy children aged 8-10 years, were included for the histologic part of the study. Patients were randomly allocated into two groups, Group A where patients received NaOCl pulpotomy and Group B where patients received propolis pulpotomy. All teeth were restored with glass ionomer, extracted after 2 months, and prepared for histopathologic evaluation under light microscopy.

Results: At 6 months, NaOCl showed 100% clinical and radiographic success rate, while propolis showed 60% and 40% clinical and radiographic success rate respectively. After 12 months, the clinical and radiographic success rates were 100% and 85.7% respectively for NaOCl, and 65.5% and 31% for propolis. Histologically, primary molars treated with sodium hypochlorite showed dentine bridge formation and organized odontoblastic layer and propolis samples showed pulp necrosis.

Conclusion: NaOCl could be used as an alternative to FC pulpotomy propolis showed unsatisfactory results when used in pulpotomy of primary teeth.

sarahshafik@hotmail.com