

ABSTRACT**EFEK KOMBINASI KALSIUM HIDROKSIDA DENGAN PROPOLIS TERHADAP APOPTOSIS MELALUI EKSPRESI BCL-2 DAN CASPASE 9 PADA PULPA TERBUKA TIKUS WISTAR**

Background: Propolis is reported have beneficial effects that are anti-bacterial, anti-viral, anti-inflammatory, anti-oxidant, and immunomodulatory. Propolis extract with anti-inflammatory properties is expected to be useful for treating inflammatory pulp tissue with diagnosis of reversible pulpitis. In this study used dental pulp wistar rats with open pulp due to mechanical lesions with the result that fibroblast cells are exposed with combination of calcium hydroxide and propolis extract for 24 and 36 hours. **Purpose:** This study aimed to investigate the effectiveness of pulp capping material combining calcium hydroxide and propolis by measuring apoptosis through the expression of Bcl-2 and Caspase 9. **Method:** The application of mechanical lesion in the dental pulp of wistar rats treated with a combination of calcium hydroxide and propolis, apoptotic activity of fibroblast cells was measured by Bcl-2 and Caspase 9 expression with immunocytochemistry 24 and 36 hours. **Results:** Bcl-2 expression was higher in the application of combination calcium hydroxide with propolis extract within 36 hours, Apoptosis expressed by Caspase 9 was lower in the application of Ca (OH) 2 combination with propolis extract in 36 hours. **Conclusion:** The combination of calcium hydroxide with propolis extract decreases apoptosis through higher Bcl-2 expression, and lower expression of Caspase 9 in open pulp fibroblast cells due to mechanical lesions.

Keywords: Propolis extracts; Fibroblast cells; Calcium hydroxide; Bcl-2; Caspase 9; Pulp capping