

## ABSTRAK

Kaping pulpa adalah perawatan yang diindikasikan untuk pulpa yang mengalami cedera traumatis maupun karena faktor iatrogenik dengan cara meletakkan medikamen Kalsium Hidroksida, *Mineral Trioxide Aggregate* (MTA), atau Biodentin secara langsung pada pulpa sehingga dapat menstimulasi pembentukan *odontoblast-like cells*. *Odontoblast-like cells* dihasilkan dari sel *undifferential mesenchyme* setelah mengalami kematian. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian medikamen kaping pulpa terhadap jumlah *odontoblast-like cells* pada pulpa gigi *Rattus norvegicus*.

Metode penelitian ini berjenis *true experimental laboratories post test only control group design*, terdiri dari empat kelompok dan sampel berjumlah 24 ekor tikus wistar. Gigi molar 1 rahang atas hewan coba dipreparasi sampai timbul perdarahan. Tiga kelompok diberi perlakuan dan seluruh gigi hewan coba ditumpat sementara, kemudian ditunggu selama 7 hari. Jaringan dibuat preparat histologi dengan pewarnaan hematoksilin-eosin dan dihitung jumlah sel *odontoblast-like cells*, kemudian dianalisa dengan uji *One Way Anova* dan *Post Hoc LSD*.

Hasil analisis data menunjukkan bahwa terdapat perbedaan yang signifikan pada pemberian medikamen kaping pulpa terhadap jumlah *odontoblast-like cells* dengan kelompok kontrol negatif, sedangkan antara kelompok Biodentin dengan MTA tidak terdapat perbedaan jumlah *odontoblast-like cells* yang signifikan.

**Kata kunci:** kaping pulpa, *odontoblast-like cells*, kalsium hidroksida, *mineral trioxide aggregate*, biodentin

## **ABSTRACT**

*Pulp capping is treatment indicated for pulp that has a traumatic injury or caused by iatrogenic factors, by placing calcium hydroxide medicaments, Mineral Trioxide Aggregate (MTA), or Biodentine directly on the pulp, stimulating the formation of odontoblast-like cells. Odontoblast-like cells produced from undifferentiated mesenchyme cells after experiencing death. The objective of this research was to determine the effect of placing three pulp capping medicaments on the odontoblast-like cell numbers in tooth pulp Rattus norvegicus.*

*This research method used a true experimental laboratory post test only design, consisting of four groups and samples of 24 Wistar rats. The maxillary molar teeth 1 were prepared until bleeding happens. The three groups were given medicaments and all animal teeth were temporarily filled for 7 days. The tissues were made as histological slide by hematoxylin-eosin staining, and odontoblast-like cell counts were observed. Data analyzed by One Way Anova test and LSD Post Hoc.*

*The results indicates some significant effect on the odontoblast-like cell numbers between on the of pulp medicaments with negative control group. There are no significant difference between the Biodentin and MTA groups there in the number of odontoblast-like cells.*

**Key words:** *pulp capping, odontoblast-like cells, calcium hydroxide, mineral trioxide aggregate, biodentine*