

INTISARI

Pencabutan gigi menyebabkan terjadinya soket gigi. Proses penulangan dalam soket bisa dipercepat dengan pemberian bahan alami. Lendir bekicot merupakan bahan alami yang biasa dipakai untuk mengobati luka, mengandung *asam hyaluronat* yang berpotensi menghambat kerja osteoklas. Tujuan penelitian ini untuk mengetahui pengaruh aplikasi gel lendir bekicot 2,5%, 5% dan 7,5% terhadap volume penulangan dalam soket pasca pencabutan gigi pada marmot.

Pasca pencabutan gigi incisivus lateral bawah, soket gigi dari dua puluh empat marmot diberi perlakuan, yaitu diolesi gel lendir bekicot 2,5%, 5% dan 7,5% pada H0, H+1 dan H+2 dan *Povidone Iodine 10%* pada H0. Pada hari ke-30 pasca pencabutan gigi, marmot di dekapitasi, kemudian mandibula difiksasi untuk pengamatan histologi. Sampel irisan dipilih secara acak sistematis dan diwarnai dengan Hematoksilli-Eosin. Estimasi volume penulangan dilakukan dengan metode hitung titik sesuai metode Stereologi. Hasil dianalisis dengan uji *Kruskal wallis* pada tingkat kemaknaan 0,05.

Volume penulangan terbesar ditemukan pada kelompok perlakuan gel lendir bekicot 7,5% ($52,27\mu\text{m}^3 \pm 12,20$) dan terkecil pada kelompok 2,5% ($43,71\mu\text{m}^3 \pm 16,71$), tetapi perbedaan tersebut tidak bermakna ($p > 0,05$). Disimpulkan bahwa pada pengamatan hari ke-30 pasca pencabutan tidak ditemukan perbedaan pengaruh aplikasi topikal gel lendir bekicot 2,5%, 5% dan 7,5% terhadap volume penulangan dalam soket pada marmot.

Kata kunci: Konsentrasi gel lendir bekicot, Volume tulang soket, Histologi

ABSTRACT

Tooth extraction causes a tooth socket. The process of bone regeneration in the socket can be accelerated by application of chemical and natural ingredients. Snail mucus is a natural ingredient commonly used to wounds healing. The content of hyaluronic acid in snail mucus has the potential to inhibit of osteoclasts. The purpose of this study was to determine the effect of 2.5%, 5% and 7.5% snail mucus gel on bone volume in the socket after tooth extraction in guinea pigs.

After the extraction of the lower lateral incisors, the tooth sockets of twenty-four guinea pigs were treated, applicated with 10% Povidone Iodine on H0 and 2.5%, 5% and 7.5% snail mucus gel on H0, H+1 and H+2. On the 30th day after tooth extraction, the guinea pig was decapitated, then the mandible was fixed for histological observation. Samples were systematically randomized and stained with Hematoxyllin-Eosin. Estimation of the bone volume was carried out using the point count method according to the Stereology method. The results were analyzed by the Krusskal Wallis test at a significance level of 0.05.

The largest of bone volume was found in the snail slime gel treatment group 7.5% ($52.27\mu\text{m}^3 \pm 12.20$) and the smallest in the 2.5% group ($43.71\mu\text{m}^3 \pm 16.71$), but the difference was not significant ($p>0,05$). It was concluded that at 30 days post-extraction there was no difference in the effect of topical application of 2.5%, 5% and 7.5% snail mucus gel on bone regeneration in the guinea pig's tooth socket.

Keywords: snail slime gel concentration, socket reinforcement, Histologi