

ABSTRAK

Ikan kembung dipercaya banyak mengandung asam lemak omega 3 (*fatty acid*) yang dapat dikembangkan untuk mempercepat proses penyembuhan luka pasca ekstraksi gigi. Penelitian ini bermaksud meneliti pengaruh fase minyak omega 3 ikan kembung (*Rastreliger kanagurata*) terhadap jumlah makrofag pasca pencabutan gigi.

Penelitian eksperimental dengan rancangan *randomized post test only control group design* yang dilakukan pada 10 ekor tikus jantan Wistar umur 2-2,5 bulan dan berat 150-200 gram. Tikus dibagi dua kelompok setelah diadaptasi selama tujuh hari, yaitu kelompok kontrol dan perlakuan secara random. Kelompok kontrol diberi pakan standar sedangkan kelompok perlakuan diberi fase minyak asam lemak omega 3 ikan kembung selama 7 hari. Jumlah makrofag diamati pada hari ketiga setelah ekstraksi gigi I1 mandibula. Perbedaan jumlah makrofag antara kelompok kontrol dan perlakuan dianalisis dengan uji Mann Whitney pada tingkat kemaknaan $p < 0,05$.

Jumlah makrofag di kelompok kontrol $1,20 \pm 0,20$, sedangkan di kelompok perlakuan $3,48 \pm 0,11$. Uji mann whitney diperoleh nilai $p = 0,008$ ($p < 0,05$) menunjukkan terdapat perbedaan jumlah makrofag antara kelompok kontrol dan perlakuan yang bermakna.

Kesimpulan penelitian fase minyak omega 3 ikan kembung (*Rastreliger kanagurata*) berpengaruh terhadap jumlah makrofag pasca pencabutan gigi.

Kata kunci: Omega 3 Ikan Kembung, Makrofag, Tikus Wistar.

ABSTRACT

Mackerel is believed to contain lots of omega-3 fatty acids that can be developed to accelerate the process of wound healing after tooth extraction. This study intends to investigate the effect of mackerel (*Rastreliger kanagurata*) omega 3 oil phase to the number of macrophages after tooth extraction.

The experimental randomized study with post test only control group design conducted on 10 male Wistar rats aged 2-2.5 months and weighing 150-200 grams. Rats were divided two groups after being adapted for seven days, the control and treatment groups at random. The control group was fed a standard, while the treatment group was given the mackerel oil phase omega-3 fatty acids for 7 days. The number of macrophages is observed on the third day after tooth extraction of I1 mandible. Differences in the number of macrophages between control and treatment groups were analyzed by Mann Whitney test at the significance level of $p < 0.05$.

The number of macrophages in the control group 1.20 ± 0.20 , while in the treatment group was 3.48 ± 0.11 . Mann Whitney test obtained p value = 0.008 ($p < 0.05$) shows that there are significant differences in the number of macrophages between control and treatment groups.

Conclusion of the research showed that mackerel (*Rastreliger kanagurata*) oil phase omega-3 fatty acids effect on the number of macrophages after tooth extraction.

Keywords: Omega 3 Mackerel Fish, Macrophage, Wistar Rats.