

ABSTRAK

Pencabutan gigi pasien dengan kelainan sistemik seperti diabetes melitus membutuhkan pertimbangan khusus, mengingat tingginya risiko komplikasi atas prosedur tersebut. Guna meminimalkan risiko komplikasi tersebut dipilih penggunaan bahan alami untuk menggantikan potensi efek samping dari penggunaan obat-obatan modern. Tujuan penelitian ini untuk mengetahui pengaruh ekstrak bayam (*Amaranthus Tricolor*) terhadap jumlah makrofag pada proses penyembuhan luka paska pencabutan gigi tikus *wistar* jantan diabetes.

Penelitian eksperimental dengan rancangan *post test control group design*. Penelitian dilakukan pada 20 ekor tikus jantan Wistar yang dibagi 2 kelompok. Model diabetes mellitus dilakukan melalui induksi aloksan monohidrat. Kelompok I (kontrol positif) dengan pemberian povidone iodine 10% 2 ml sedangkan kelompok II (perlakuan) diberi ekstrak bayam 10% sebanyak 9 mg/kgBB. Perlakuan diberikan selama 1 dan 3 hari, pencabutan gigi pada masing-masing kelompok dilakukan pada hari ke-1 dan hari ke-3 paska pemberian perlakuan dilanjutkan dengan pengamatan jumlah makrofag. Uji *Independent t-test* pada kemaknaan $p < 0,05$ digunakan untuk menganalisis perbedaan jumlah makrofag antar kelompok.

Hasil penelitian menunjukkan rata-rata jumlah makrofag hari ke-1 kelompok I dan II sebesar $4,74 \pm 0,62$ dan $7,08 \pm 1,52$ ($p=0,016$), sedangkan pada hari ke-3 rata-rata jumlah makrofag kelompok I dan II sebesar $7,72 \pm 0,64$ dan $9,44 \pm 0,43$ ($p=0,001$).

Kesimpulan: Ekstrak bayam (*Amaranthus Tricolor*) berpengaruh terhadap jumlah makrofag pada proses penyembuhan luka paska pencabutan gigi tikus *wistar* jantan diabetes.

Kata kunci: Ekstrak Bayam, Jumlah Makrofag.

ABSTRACT

Tooth extraction of patients with systemic disorders such as diabetes mellitus requires special consideration, remained to the high risk of complications of the procedure. In order to minimize the risk of these complications, options of the natural materials use to replace the potential adverse effects of the modern medicine use are needed. The purpose of this study was to determine the effect of spinach extract (Amaranthus Tricolor) on the number of macrophages on the wound healing process after tooth extraction in diabetic wistar rat's.

Experimental research with post test control group design design that was conducted on 20 male Wistar rats divided into 2 groups. Diabetes mellitus models were made alloxan monohydrate induction. Group I (positive control) with povidone iodine 10% 2 ml while group II (treatment) was given 10% spinach extract 9 mg/kgBW. The treatment was given for 1 and 3 days, the tooth extraction in each group was done on the first and the third day after the treatment followed by the observation of the macrophages number. Independent t-test on significance $p < 0.05$ was used to analyze the difference of the macrophages number between two groups.

The results showed that the average number of macrophages on the 1st day in group I and II were 4.74 ± 0.62 and 7.08 ± 1.52 ($p = 0.016$), while on the 3rd day the average number macrophages in group I and II were 7.72 ± 0.64 and 9.44 ± 0.43 ($p = 0.001$).

Conclusion: Spinach extract (Amaranthus Tricolor) effect on the number of macrophages in the wound healing process after tooth extraction in diabetic wistar male rat's.

Keywords: Spinach Extract, Number of Macrophages.