

INTISARI

Temu putih (*Curcuma zedoaria*) dikenal dapat dikembangkan sebagai obat antikanker karena kandungan senyawa bioaktif utamanya yaitu kurkumin yang bersifat imunomodulator. Penelitian ini bertujuan mengetahui pengaruh ekstrak temu putih terhadap jumlah sel PMN tumor kulit mencit strain BALB/c.

Penelitian eksperimental dengan rancangan *post test only control group design* menggunakan 24 ekor mencit strain BALB/c. Mencit dibuat model tumor kulit dengan cara diinduksi DMBA dan TPA masing-masing selama 2 minggu. Mencit dibagi dalam 4 kelompok: kelompok I (kontrol) tanpa pemberian ekstrak temu putih, kelompok II, III, dan IV masing-masing diberi ekstrak temu putih dosis 2, 4, dan 8 mg/hari selama 4 minggu. Sel PMN diamati dan dihitung menggunakan mikroskop cahaya dengan perbesaran 400x pada 5 lapang pandang. Jumlah sel PMN dianalisis dengan uji kruskal wallis dilanjutkan dengan uji mann whitney.

Jumlah sel PMN di kelompok IV tertinggi ($9,60 \pm 0,61$ sel), diikuti oleh kelompok III ($9,20 \pm 0,66$ sel), II ($5,77 \pm 0,98$ sel), dan I ($1,07 \pm 0,76$ sel). Uji kruskal wallis diperoleh p sebesar 0,000 artinya perbedaan jumlah sel PMN pada keempat kelompok bermakna. Uji mann whitney diperoleh perbedaan jumlah sel PMN yang bermakna hampir pada semua kelompok ($p < 0,05$), kecuali antara kelompok III dan IV ($p = 0,774$).

Disimpulkan bahwa pemberian ekstrak temu putih berpengaruh terhadap jumlah sel PMN tumor kulit mencit strain BALB/c.

Kata kunci: Sel PMN, Ekstrak Temu Putih, Tumor Kulit.

ABSTRACT

White tumeric (*Curcuma zedoaria*) is known could be developed as an anticancer drug because of its main bioactive compound i.e curcumin that had immunomodulatory properties. This study aims to determine the effect of white tumeric extract on the number of PMN cells inskin tumor model of BALB/c.

This was an experimental research with post test only control group design that used 24 BALB/c mice strain. Mice were made as skin tumor model by induced DMBA and TPA respectively for 2 weeks. Mice were divided into 4 groups: group I (control) without white tumeric extract administration, group II, III, and IV were administered with white tumeric extract dose 2, 4, and 8 mg/day respectively for 4 weeks. PMN cells are observed and counted using a light microscope with a magnification of 400x in 5 fields of view. The number of PMN cells was analyzed with kruskal wallis followed by mann whitney test.

The number of PMN cells in the group IV was highest (9.60 ± 0.61 cells), followed by group III (9.20 ± 0.66 cells), II (5.77 ± 0.98 cells), and I (1.07 ± 0.76 cells). Kruskal wallis test obtained $p = 0,000$ means that the difference of PMN cell in all of four groups is significant. The mann whitney test obtained a significant difference in the number of PMN cells in almost of paired groups ($p < 0.05$), except between groups III and IV ($p = 0.774$).

It was concluded that there was an effect of white tumeric extract on the number of PMN cells in skin tumor model of BALB/c.

Keywords: PMN Cells, White Tumeric Extract, Skin Tumor.