

ABSTRACT

Background: The prevalence of traumatic ulcers is 3-24% of the worldwide. Ulcers cause discomfort in the oral cavity. One of the etiologies of traumatic ulcers is exposure to chemicals such as H_2O_2 . Black cumin oil has been shown to have ability to cure chemical ulcers in the gingiva of mice. **Objective:** This study to investigate the effect of black cumin oil emulgel (EMJH) on the number of fibroblasts, expression of VEGF and ulcer diameter in rats. **Methods:** Twenty-four male wistar rats were induced with H_2O_2 in the gingiva for 2 days. Then divided into negative control groups, positive control group and emulgel of black cumin oil. Ulcer diameter measurements were performed on day 1, 3 and 5. Mice were terminated on day 5 and made histological preparations. Data were analyzed with SPSS. **Results:** There was a significant difference in the number of fibroblasts, expression of VEGF and ulcer diameter ($p < 0.005$). **Conclusion:** EMJH can increase the number of fibroblasts, and increase the VEGF and decrease the diameter of the cervical ulcer on day 5

Keywords: black cumin oil emulgel, fibroblasts, VEGF, ulcer diameter