

ABSTRACT**The Effects of *Nigella sativa* oil extract administration on wound healing in mouse (*Mus musculus*)**

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Introduction: *Nigella sativa* is a folk medicinal plant that has been used to treat many disease. The active substance, thymoquinone, is proven to have antibacterial and antioxidant effect. Both of the features are affecting the process of wound healing. Bacterial infection and oxidative stress may delay wound healing. This study is aimed to understand the effect of *Nigella sativa* seed oil extract administration to wound healing process.

Methods: This study was an analytical experimental study conducted in laboratory. A total of 21 mice obtained from Experimental Animal Unit Laboratory of Department of Biochemistry in Universitas Airlangga was chosen randomly and divided into 3 groups. *Nigella sativa* extract was made from *Nigella sativa* seeds processed in Pharmacognosy Laboratorium in Pharmacy Faculty of Universitas Airlangga. *Nigella sativa* oil extract was made from 25 mg of *Nigella sativa* seeds producing 20 ml of oil extract. All of the groups were given excision wound and different wound treatment to each group. The first group was treated with povidone iodine topically, second group was treated with normal saline topically, and third group was treated with *Nigella sativa* extract 0,05 ml orally everyday for 15 day. Wound measurement was conducted on 5, 10, and 15 days after the wounding.

Results: Analytical test results showed that there were no significant difference of wound contraction between all of the groups including the *Nigella sativa* extract treated group.

Conclusion: *Nigella sativa* extract with 1,25 g/ml concentration and 0,05 ml/day of administration dose did not have a significant effect on wound healing.

Keywords: *Nigella sativa*, wound healing, wound contraction, mouse