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Pengaruh Ekstrak Cacing Tanah (*Lumbricus Rubellus*) terhadap Penyembuhan Luka Terinfeksi Bakteri *S. Aureus* pada Hewan Coba Tikus Putih (*Rattus Norvegicus*)

Abstrak :

ABSTRACT

THE EFFECT OF EARTHWORM LUMBRICUS RUBELLUS EXTRACT TO THE INFECTED WOUND HEALING BY STAPHYLOCOCCUS AUREUS BACTERIA IN RATTUS NORVEGICUS

A True experimental Study in the Biochemistry Laboratory Medical Faculty Airlangga University, Surabaya

By : Nur Wakidah

Staphylococcus aureus is gram positive bacteria that usually infected wound and can be resistant to antibiotic. Earthworm is one of traditional treatment for infected wound because it has a lot of advantages. This study was aimed to explain the effect of earthworm extract to the wound healing infected by Staphylococcus aureus bacteria.

Design used in this study was true experimental. The sample were 18 Rattus norvegicus divided randomizely into three groups. The groups are positive control group, negative control group, and earthworm extract group. The

independent variable was the using of earthworm extract. The dependent variables were inflammation phase (erythema, oedema and wound fluid) and prolifiration phase (wound granulation and wound side) which were observed in 3rd, and 6th days. Data were collected using observation paper based on the sign of inflammation and prolifiration. Data were then analyzed using One-Way ANOVA and Kruskal-wallis test with level of significance

α≤0,05.

Result showed that there were differences between earthworm extract and positive control group in erythema ($p= 0.031$), wound granulation ($p= 0.029$) and wound side ($p= 0.029$) at 3rd day and wound granulation ($p= 0.029$) and wound side (0.029) at 6th day.

It can be concluded that earthworm extract usage can increase wound healing infected by Staphylococcus aureus bacteria. Microscopic observation of collagen, PMN-cell (neutrophile), lymphocyte and monocyte cell is needed. Further study involve patented of earthworm extract for wound therapy needed.