ABSTRACT

EFFECT OF STERILIZED LYOPHILIZED AMNIOTIC MEMBRANE IRRADIATION (ALS-R) AS BIOLOGICAL DRESSING ON SECOND-DEGREE BURN WOUND HEALING IN *WISTAR* STRAIN RAT

By

Dina Ikrama Putri

Background : Second-degree burn wound is skin damage occurs on epidermal layer and partly dermal tissue with the highest prevalence percentage among other degrees of burn wound. Second-degree burn wound easily induces inflammatory tissue response, thereby making the selection of wound dressing is becoming important consideration to minimalize complication occurence and accelerate wound healing. Biological tissue named sterilized lyophilized amniotic membrane irradiation (ALS-R) has been developed and in some studies mention its roles to accelerate wound healing. This study aims to determine the effect of ALS-R on second degree burn wound healing.

Method : This is an experimental research executed in 27 of rat samples lotted into three differential treatments. Treatments are divided into Group K: control (aquades), P1 : silver sulfadiazine and P2 : ALS-R. Results are then analyzed with *Kolmogorov-Smirnov* alternative test to evaluate macroscopically in 15 days and microscopically with H/E staining.

Result : The results indicated that ALS-R promotes wound healing time significantly (p = 0.01), but there was no significant effect on allergy reaction, local infection and complete re-epithelization.

Conclusion : ALS-R is able to accelerate second-degree burn wound healing both observed by macroscopic and microscopic evidences.

Keywords : ALS-R, amnion, burn wound, silver sulfadiazine