

ABSTRACT

**THE EFFECT OF PROBIOTICS (MONO AND MULTI STRAIN)
TO DECREASE LEVELS OF INTERLEUKIN-6
IN MODERATE-SEVERE BURN PATIENTS**

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Background: Sepsis and multiple organ dysfunction syndrome (MODS) is a major cause of mortality in burns. A breakdown in gut barrier function and immune dysfunction are associated with the onset of MODS. Burn injuries suppress the adaptive (humoral and cellular) immunity. Interleukin 6 is one of the pro inflammatory mediators, released extensively in burns. Probiotic bacteria have been shown to modulate intestinal barrier and immune function. This study assessed the efficacy of a probiotics multi and mono strain of Lactobacillus and Bifidobacteria supplementation to decrease Interleukin 6 in burn patients.

Objective: Compare the effect of combination mono and multi strain probiotics to decrease Interleukin 6 in burn injury patients.

Method: A double-blind, randomized clinical trial was conducted in the burn unit and intensive care unit of Dr. Soetomo general hospital. Twenty six burn patients were randomly assigned to receive multi strain probiotics and mono strain probiotics for fourteen days. Treatment was started on day 4 post burn injury. Systemic concentration of IL-6 was measured on day 4 post burn injury (before treatment) and day 19 (post treatment).

Result: Results of this study show in the multi-strain group, the mean of IL-6 levels decreased from 139.19 pg/ml (H-4) into 114.08 pg/ml (H-19). However, Paired T-test mono strain probiotics ($p=0,804$) and multi strain ($p=0,683$) no significantly different to decrease IL-6. Independent T-test between mono strain probiotics and multi strain also show not significantly different ($p = 0,637$).

Conclusion: There are no significantly difference between mono strain probiotic with multi strain probiotic to decrease IL-6 in patients with burns hospitalized in June until September 2016 at RSUD Dr. Soetomo Surabaya.

Keyword : probiotic, mono strain, multi strain, IL-6, burns, sepsis.