ABSTRACT

THE EFFECT OF PROBIOTICS (MONO AND MULTI STRAINS) TO THE ELEVATION OF IMMUNOGLOBULIN A IN MODERATE-SEVERE BURN PATIENTS

(Study at Burn Unit of Dr. Soetomo Teaching Hospital Surabaya)

***Background*:** Major burns cause supression both celluler dan humoral immunity. Immunoglobulin A, one of the immunoglobulins in human body, plays an important role as an anti-inflammation antibody. Burns supress immunoglobulin which altered immune function. Probiotics not only have been shown to maintain gut health, but also to modulate immune function both celluler and humoral (immunoglobulin). This study was designed to determine the effect of probiotics treatment (mono and multi strain of *Lactobacillus* and *Bifidobacteria*) on the immunoglobulin A level in burn injury.

***Patients and Methods* :** Seventeen consecutive patients with moderate and severe burn were randomly divided into two groups as probiotics mono strain (n=8) and probiotics multi strain (n=9), once daily for fourteen days. Serum concentration of IgA was measured by ELISA before initiation of the study and the 19^{th} day after treatment.

***Results*:** The baseline characteristics of the two treatment groups were similiar. Patients who were died and developed to sepsis also similiar between two groups. Burns caused a decrease in IgA level at post-burn third days. A significant increase in IgA (*P*=0,000) in probiotics mono strain and in probiotics multi strain (*P*=0,025). However, there is no significant differences between two groups to increase IgA (*P*=0,587) during this study.

***Conclusion*:** Treatment of burn patients with probiotics (both mono and multi strain of *Lactobaccillus* and *Bifidobacteria*) significantly elevated the IgA level during this study. This data suggested that probiotics have a beneficial effect in systemic immunity, especially immunoglobulin, against burn injury-decreased immunoglobulin.

Keyword : Probiotics, Mono Strain, Multi Strain, IgA, Burns, Sepsis.