

ABSTRACT

Recently there has been a tendency to use alternative therapy because the conventional medication is expensive, and sometimes it is not effective.

Along with the improvement of medical technology particularly in the pain reduction, the pharmacist develops many analgesic medicines. These medicines have been widely used in the community and the use of the medicines must be controlled; otherwise they will cause negative effects.

The Javanese have many traditional therapies. One of them is *kerokan*, which is believed to be a practical, cheap, rational, effective, and approved therapy. This therapy is applied by rubbing a blunt thing repeatedly on the skin of back, neck, and chest with sly oil. Many people including young and adult people use this therapy. *Kerokan* is used for the common cold therapy. Due to the vast of using *kerokan* therapy and its importance as the heritage of culture that should be preserved, it is necessary to conduct research on the advantages of this therapy.

The aim of this research is to observe the mechanism of myalgia reduction after *kerokan* therapy. The special aim is to prove that *kerokan* therapy causes the increase and decrease in the inflammation mediators: the IL-1 β , C_{1q}, C₃, and β -endorphin levels increase and the PGE₂ level decreases.

This is an experimental research with a randomized pre test-post test control group design. The research was done at *Padma* clinic. The number of samples was 38 patients and they were divided into two groups; 19 patients were included in the treatment group and the rest (19 patients) were included in the control group. The research employed statistics tests which included the Kolmogorov-Smirnov test, t parametric test, Mann-Whitney nonparametric test, and correlation test at the significance level of 5%.

Based on the results of the analysis, the conclusions are drawn as follows: 1) the IL-1 β , C_{1q} and β -endorphin levels after *kerokan* tend to increase, while the C₃ and PGE₂ levels after *kerokan* tend to decrease; 2) there is a significant difference on the PGE₂ level as well as β -the endorphin level between the treatment group and the control group; and 3) there is a significantly negative correlation between the β -endorphin level and the PGE₂ level in the treatment group. If the β -endorphin level increases, then the PGE₂ level decreases, and vice versa.

Key words: *Kerokan*, myalgia, inflammation mediators.