

ABSTRACT***THE EFFECT OF SMOKING ON ERYTHROCYTE, HEMATOCRIT, AND HEMOGLOBIN CONCENTRATION IN MEN WITH MODERATE-HEAVY SMOKERS AGED 30-34 YEARS IN REJOSARI VILLAGE, KRATON, PASURUAN***

Cigarettes contain carbonmonoxide (CO) which will bind to hemoglobin to form carboxyhemoglobin. It can be caused hemoglobin oxygen bond is reduced, so that the cell will hypoxic. The body will compensate with stimulates bone marrow to produce erythrocytes, thus, hemoglobin can increased. Purpose of this research is to determine the effect of smoking against erythrocytes, hematocrit, and hemoglobin on male moderate-heavy smokers' age 30-34 years in the village Rejosari, Kraton, Pasuruan. This observational study was cross-sectional design using 40 people as a sample. Male smokers and non-smokers is independent variable. While erythrocytes, hematocrit value, and hemoglobin concentration is the dependent variable. Samples were measured using a pocH 100i Sysmex automatic hematological analyzer. Analysing data uses an independent-samples t test. Research shows that smoking can be improve Period erythrocytes, hematocrit value, and hemoglobin level. On smokers, the average erythrocyte is $5.66 \pm 0.38 \times 10^6 / \text{mL}$, hematocrit is $50.9 \pm 2.55\%$, and hemoglobin is $15.26 \pm 0.87 \text{ g/dl}$. Meanwhile, the average of erythrocyte is $5.30 \pm 0,27 \times 10^6 / \text{mL}$, hematocrit is $48.0 \pm 2.53\%$ and hemoglobin is $14.37 \pm 0,93 \text{ g/dl}$ in non-smokers.

Keyword : *Male smokers, Moderate, Heavy smokers, erythrocyte count, Hematocrit, Hemoglobin concentration, POCH 100i Sysmex Automatic hematological analyzer*