

ABSTRACT

Smoking has become one of the leading causes of death worldwide. The negative impact of smoking usually occurs after a few years of someone starting to actively smoke can harm all organs of the body and become a major risk factor for several diseases with inflammatory components. Systemic inflammatory reaction is characterized by an increase in inflammatory cytokines, blood cell counts and blood viscosity. Examination of C - Reactive Protein (CRP) and Erythrocyte Sedimentation Rate (ESR) are the two most frequently measured laboratory tests in assessing the response of a systemic inflammatory process. This study aims to determine and analyze the correlation between ESR and hs-CRP values in active smokers in coffee shops in East Surabaya. The type of research used was a correlation study with a cross sectional approach to determine whether there was a relationship between ESR and High Sensitivity C-Reactive Protein (hs-CRP) in active smokers. The samples were 30 active smokers with criteria for active smokers of productive age who were male, have smoked 100 cigarettes and have smoked regularly for the last 30 days using conventional cigarettes. This research was carried out on February 2 – April 11, 2022 and the examination of ESR values and hs-CRP levels was carried out at Balai Besar Laboratorium Kesehatan (BBLK) Surabaya. This study showed that the average value of the erythrocyte sedimentation rate was 8.37 mm/hour and hs-CRP 1.11 mg/L. Based on statistical tests, There is no correlation between the value of ESR and hs-CRP in active smokers in a coffee shop in the East Surabaya area (p value = 0.099) with a sufficient relationship and a positive direction of relationship ($r = 0.307$).

Key Words : Erythrocyte Sedimentation Rate, hs-CRP, Smokers