

ABSTRAK

Remaja, dewasa, dan bahkan anak kecil masih merokok. Kebiasaan ini dapat membahayakan tubuh seseorang hingga kematian. Rokok mengandung karbon monoksida (CO), salah satu dari banyak zat kimia yang dapat menyebabkan masalah kesehatan. Gas karbon monoksida yang dihasilkan dari pembakaran rokok dihirup, masuk ke paru-paru, dan kemudian masuk ke aliran darah. Tujuan dari penelitian ini adalah untuk menyelidiki bagaimana kadar karbon dioksida (COHb) dan kadar hemoglobin pada individu yang perokok aktif di Kabupaten Gresik berhubungan satu sama lain. Hal ini terjadi karena daya ikat hemoglobin karbon dioksida lebih besar daripada daya ikat hemoglobin oksigen. Penelitian observasional analitik dengan rancangan cross-sectional ini dilakukan di Laboratorium Toksikologi dan Hematologi Jurusan Teknologi Laboratorium Medis Poltekkes Kemenkes Surabaya dari Oktober 2022 hingga Juni 2023. Tiga puluh perokok aktif diuji darah menggunakan metode purposive sampling. Hasil studi menunjukkan kadar COHb rata-rata 0,89 %; kadar hemoglobin rata-rata 14,6 g/dL. Uji statistik dilakukan dengan uji korelasi Spearman. Hasil penelitian menunjukkan bahwa pada individu yang merokok aktif di Kabupaten Gresik, tidak ada korelasi antara COHb dan hemoglobin.

Kata kunci : Kadar Karbon Monoksida, Kadar Karboksihemoglobin, Kadar Hemoglobin

ABSTRACT

Teenagers, adults, and even young children still smoke. This habit can harm a person's body until death. Cigarettes contain carbon monoxide (CO), one of many chemicals that can cause health problems. Carbon monoxide gas produced from burning cigarettes is inhaled, enters the lungs, and then enters the bloodstream. The purpose of this study was to investigate how carbon dioxide (COHb) levels and hemoglobin levels in individuals who are active smokers in Gresik Regency relate to each other. This happens because the binding power of carbon dioxide hemoglobin is greater than the binding power of oxygen hemoglobin. This analytical observational study with a cross-sectional design was conducted at the Toxicology and Hematology Laboratory of the Department of Technology, Medical Laboratory of Poltekkes, Ministry of Health, Surabaya from October 2022 to June 2023. Thirty active smokers were tested for blood using purposive sampling. The results showed an average COHb level of 0.89%; hemoglobin levels averaged 14.6 g/dL. Statistical tests were performed with the Spearman correlation test. The results showed that in individuals who smoked actively in Gresik Regency, there was no correlation between COHb and hemoglobin.

Keywords : Level Carbon Monoxide, Level Carboxyhemoglobin, Level Hemoglobin