

ABSTRAK

Pencemaran udara merupakan masalah yang serius di Indonesia, seiring dengan bertambahnya jumlah kendaraan dan ekonomi transportasi. Hal tersebut menyebabkan paparan emisi gas buangan kendaraan bermotor apabila terhirup akan menimbulkan bahaya bagi tubuh. Tukang becak merupakan salah satu profesi yang memiliki resiko terpajan gas CO yang ada di udara sehingga mempengaruhi konsentrasi COHb di dalam darah. COHb dalam darah akan berikatan dengan hemoglobin sehingga memicu terjadinya penurunan tekanan O₂ dan merangsang sekresi pelepasan hormon eritropoietin dari ginjal sehingga terjadi eritropoiesis, untuk memenuhi kebutuhan O₂ dalam darah. Hal tersebut mengakibatkan produksi sel darah merah menjadi meningkat. Sehingga mempengaruhi nilai indeks eritrosit serta hemoglobin. Penelitian ini merupakan penelitian observation analitik dengan rancangan penelitian *cross sectional*. Populasi dalam penelitian ini adalah Tukang becak di Surabaya Selatan. Sampel penelitian akan dilakukan pemeriksaan COHb dengan metode difusi conway di Balai Besar Laboratorium Kesehatan Surabaya, untuk pemeriksaan Hemoglobin dan Indeks eritrosit menggunakan metode *fluorescence flow cytometry* di Laboratorium Hematologi Jurusan Teknologi Laboratorium Medis Poltekkes Kemenkes Surabaya pada bulan April 2022. Hasil penelitian ini menunjukkan menunjukkan tidak terdapat korelasi antara kadar karboksihemoglobin dengan kadar hemoglobin dan indeks eritrosit pada tukang becak di Surabaya Selatan.

Kata Kunci : Karboksihemoglobin, Hemoglobin, Indeks Eritrosit, Tukang Becak

ABSTRACT

Air pollution is a serious problem in Indonesia, along with the increasing number of vehicles and the transportation economy. This causes exposure to motor vehicle exhaust emissions when inhaled, which will pose a danger to the body. Rickshaw driver is one of the professions that has the risk of exposure to CO gas in the air so that it affects the concentration of COHb in the blood. COHb in the blood will bind to hemoglobin, triggering a decrease in O₂ pressure and disrupting the secretion of the release of the hormone erythropoietin from the kidneys so that erythropoiesis occurs, to meet the needs of O₂ in the blood. This results in increased production of red blood cells. Thus affecting the value of the erytosome index and hemoglobin. This research is an analytical observation study with a cross-sectional research design. The population in this study was a rickshaw driver in South Surabaya. The research sample will be carried out COHb examination with the Conway diffusion method at the Surabaya Health Laboratory Center, for hemoglobin and erythrocyte index examination using the fluorescence flow cytometry method at the Hematology Laboratory, Department of Technology, Poltekkes Medical Laboratory, Ministry of Health Surabaya in April 2022. The results of this study showed that there was no correlation between carboxyhemoglobin levels and hemoglobin levels and erythrocyte index in rickshaw drivers in South Surabaya

Keywords: Carboxyhemoglobin, Hemoglobin, Erythrocyte Index, Rickshaw Driver