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Perbedaan lama waktu pajanan dengan tinggi kadar Pb dalam darah sopir angkutan jurusan Cicaheum-Ciroyom Kota Bandung tahun 2007

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Abstrak

Pajanan Pb dapat terakumulasi di dalam darah manusia sesuai lama waktu pajanan dan berdampak pada kesehatan. Tujuan Penelitian ini adalah menganalisis lama waktu pajanan terhadap kadar Pb, kadar Haemoglobin, kadar Kreatinin dan Blood Urea Nitrogen (BUN) dalam darah sehingga dapat diketahui perbedaannya dan dampak kesehatannya_ Responden dibagi 3 kelompok berdasarkan lama kerja berturut-turut 1 tahun, 5 tahun dan 10 tahun masing-masing kelompok 30 responden kemudian diambil darah vena ± 9 cc. Analisis Pb dengan alat Atomic Absorbance Spectrofotometer Graphite Furnace (AAS-GF), analisis kadar Haemoglobin menggunakan Haematology Analiser Otomatic dengan metoda Siarunethemoglobin. Kadar 1Creatinin dart BUN diukur dengan alat Autoanaliser Spectrofotometer, dengan metoda Jaffe untuk kreatinin dan metoda Kinetik UV untuk BUN. Rata-rata kadar Pb sopir dengan lama ketja 10 tahun adalah 86,747 ± 25,712; 5 tahun 65,360 ± 18,098 dart < 1 (alum : 53,107 ± 20,950 dengan peningkatan secara signiftkan sesuai larna keda (P < 0,000) kadar 14 mg/dl di temukan pada kelompok 10 tabon sebanyak 43,3 %, kelompok 5 Whim 3,3% dan kelompok 5. 1 tahun sebanyak 10 % dengan peningkatan secara signifikan sesuai lama kerja (P <0,000). Rata-rata kadar Kreatinin sopir dengan lama kerja kelompok 10 tahun : 0,874 0,098, kelompok 5 tahtm : 0,843 ± 0,077 dan kelompok < 1 talum : 0,828 + 0,102, tidak ada perhedaan hermakna (P < 0,707). Terdapat perbedaan yang bermakna (P< 0,012) pada rata-rata kadar BUN kelompok sopir lama ketja 10 tahun, 5 tahun dan < I tahun, yaitu herturnt-turut 24,767 ± 5,036 ; 22,367 ± 3,819 dan 21,267 ± 4,727. Kesimpulan lama waktu pajanan Pb berpengaruh terhadap tinggi kadar Pb dalam darah (terakumulasi) sehingga meningkatkan angka kejadian anemia, dan meningkatkan kadar BUN dalam daralt, teiapi tidak mempengaruhi kadar kreatinin darah.

.....Pb exposure can be accumulated in human blood in proportion to the exposure duration and it impacts on health_ The purpose of this research was to analyze the influence of exposure duration on Pb content, hemoglobin content, creatinin content, and Blood Urea Nitrogen (BUN) in blood so as to find out its differences and its impact on health. The respondents were divided into 3 groups based on the working duration of respectively 1 year, S years. and 10 years, each consisting of 30 respondents, and then vena blood of _± .9 cc was taken. The analysis of Pb was by Atomic Absorbance Spectrophotometer Graphite Furnace (AAS--GF), whereas the analysis of Hemoglobin content used Hematology Analyzer Automatic by Sianmethemoglobin method. Creatinin and BUN contents were measured by Autocznalyzer Spectrophotometer, by using fee method for c..reatinin and UV Kinetics method for BUN. Average Pb content of drivers with a 10-year working duration was 86.747± 25.772; 5 years: 65.360 43.3% d- 18.098; and < 1 year: 53.107 ± 20.950, with a significant increase in proportion to the working duration (P <0.000). Jib content < 14 mg/d1 was found in the 10-years group of 43.3%, 5-years group of 3_3%, and < 1-year group of 10%, with a significant increase in proportion to the working duration (P<0.000). The average creatinin content of the drivers with a working duration qf 10- years group: 0.874 ± 0.098. 5-years group: 0.843 .± 0.077, and S 1-year group: 0.828 d.0.102, there is an insignificard dOerence (P<0.707). There is a

significant difference (P<0.012) in the average BUN content of the drivers of 10-years, 5-years, and <1-year groups, that is, 24.767 ± 5.036. 22.367 .± 3.819, and 21.2671-4.721 respectively. Conclusion: the duration of Pb exposure has influence on Pb content in blood (accumulated) so that it increases incidence rate of anemia, and it also increases BUN content in blood, but it has no influence on blood creatinin content.