

Analisis pajanan benzena melalui pemeriksaan konsentrasi s-phenylmercapturic acid (S-PMA) dalam urin terhadap kadar trombosit pada pekerja bengkel alas kaki di Desa Sukajaya Kecamatan Tamansari Kabupaten Bogor 2018 = Benzene exposure analysis through examination of s-phenylmercapturic acid (S-PMA) concentration in urine at platelet level in footwear workshop workers in Sukajaya Village Tamansari Sub District, Bogor Regency 2018

Siti Norjannah, author

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Abstrak

Keberadaan benzena dalam lem alas kaki ini membahayakan kesehatan para pekerjadi bengkel alas kaki karena sifatnya yang toksik dan karsinogenik. Dampak yang ditimbulkan adalah terganggunya sumsum tulang yang merupakan tempat produksi sel darah merah; darah putih dan trombosit. Tujuan dari penelitian ini adalah menganalisis hubungan pajanan benzena melalui pemeriksaan konsentrasi S-phenylmercapturic acid S-PMA di urin terhadap kadar trombosit pada pekerja bengkel alas. Desain dari penelitian adalah cross sectional pada pekerja pabrik alas kaki di Desa Sukajaya dengan jumlah sampel 73 pekerja. Sampel yang diambil adalah urin dan darah dari pekerja untuk mengetahui konsentrasi S-PMA dan kadar trombosit. Konsentrasi S-PMA diukur dengan alat LC-MS/MS dan trombosit dengan Automated Hematology Analyzer. Karakteristik individu dengan wawancara secara langsung. Hasil penelitian menunjukkan nilai OR=2,28 antara konsentrasi S-PMA terhadap kadar trombosit. Variabel kebiasaan olahraga dengan OR=1,58 antara olahraga tidak rutin terhadap trombosit dan konsumsi alkohol OR=1,78 antara yang mengonsumsi terhadap kadar trombosit. Hasil uji regresi logistik multivariabel menunjukkan nilai OR=2,59 pekerjadengan konsentrasi S-PMA >0,67 g/g kreatinin terhadap kadar trombosit setelah dikontrol variabel umur dan konsumsi alkohol.

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The existence of benzene in the glue of footwear is endangering the health of the workers in the footwear workshop because of its toxic and carcinogenic nature. The impact is the disruption of the bone marrow which is where the production of red blood cells; white blood and platelets. The purpose of this study was to analyze the relationship of benzene exposure through the examination of S phenylmercapturic acid S PMA concentration in urine on platelet levels in base workshop workers. The design of the study was cross sectional on footwear factory workers in Sukajaya Village with a sample of 73 workers. Samples taken are urine and blood from workers to know the concentration of S PMA and platelet levels. The concentration of S PMA was measured by LC MS MS and platelets with Automated Hematology Analyzer. Individual characteristics with direct interview. The results showed the value of OR 2.28 between S PMA concentration to platelet level. Variables of exercise habits with OR 1.58 between non routine exercise on platelets and alcohol consumption OR 1.78 among those who consume to platelet levels. Multivariable logistic regression test results showed OR 2.59 workers with S PMA concentration 0.67 g g creatinine on platelet count after controlled for age and alcohol consumption.