

Analisis kadar merkuri dalam rambut dengan gangguan fungsi sistem saraf pusat pada pekerja tambang emas Desa Situmulya Kecamatan Cibeber Kabupaten Lebak, Propinsi Banten Tahun 2016 = Analysis of mercury levels in hair with impaired central nervous system function in gold workers Situmulya Village Cibeber Sub District Lebak District, Banten Province 2016

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Abstrak

Penelitian analisis kadar merkuri dalam rambut dengan gangguan fungsi sistem saraf pusat bagi pekerja pertambangan emas, dilakukan untuk dapat memberikan referensi terkait dampak penggunaan merkuri dan penanggulangannya bagi kesehatan masyarakat. Penelitian ini menggunakan metode cross sectional dengan menganalisis data sekunder dari Kementerian Kesehatan terhadap 119 sampel.

Hasil pengukuran kadar merkuri dalam rambut pekerja, didapatkan 77,9% berada diatas normal, angka Nilai Indeks Paparan Biologi yang dipersyaratkan 3g/g (ACGIH, 2005). Analisis kadar merkuri dalam rambut dengan gangguan fungsi sistem saraf pusat, secara perhitungan statistik menunjukkan tidak ada hubungan signifikan, namun pekerja dengan kadar merkuri tinggi berisiko 3,12 kali, CI 95% (0,67 - 14,36) terhadap gangguan fungsi sistem saraf pusat. Analisis berbagai faktor konfounding, yaitu: Lama paparan, konsumsi sayur-buah, konsumsi ikan, penggunaan pestisida dan atau insektisida dan kebiasaan merokok, berdasarkan perhitungan statistik, hanya penggunaan pestisida secara konstan mempunyai hubungan diantara keduanya dan berisiko 3,97 kali, CI 95% (1,51 - 10,43) terhadap gangguan fungsi sistem saraf pusat.

Hasil analisis multivariat, didapatkan responden dengan kadar merkuri dalam rambut tinggi, mempunyai risiko 2,82 kali lebih besar dengan CI 95% (0,595-13,379) untuk mengalami gangguan fungsi sistem saraf pusat setelah dikontrol variabel penggunaan pestisida. Pencegahan dan pengendalian dampak kesehatan akibat penggunaan merkuri perlu melibatkan berbagai pihak baik pemerintah, swasta dan masyarakat, melalui program eliminasi, substitusi, pengendalian teknis dan administrasi.

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Research into the analysis of mercury levels in hair with impaired central nervous system function for gold mining workers, was conducted to provide a reference to the impact of mercury use and its prevention for public health. The method in this research use cross sectional design. This research used secondary data from Ministry of Health, with 119 miners as samples.

The results of the measurement of mercury in the hair of workers, obtained 77.9% above normal, Biology Exposure Index value 3g / g (ACGIH, 2005). Analysis of mercury levels in the hair with impaired function of the central nervous system, the statistical calculation showed no significant relationship, but workers with high mercury levels risked 3.12 times, 95% CI (0.67 - 14.36) against impaired functioning of the nervous system center. Analysis of various confounding factors, namely: Length of exposure, consumption of fruits, fish consumption, pesticide and or insecticide use and smoking habits, based on statistical calculations, only the use of pesticides has a constant relationship between them and 3.97 times risk, 95% (1.51 - 10.43) against impaired functioning of the central nervous system.

The result of multivariate analysis, obtained by respondent with high mercury in hair, had 2.82 times greater

risk with 95% CI (0,595-13,379) for impaired function of central nervous system after controlled variable of pesticide usage. Prevention and control of health impacts due to the use of mercury should involve various parties, government, private and public, through elimination, substitution, technical and administrative control programs.