Kadar serum surfactant protein d (sp-d) pada pekerja tambang kapur = The surfactant protein d (sp-d) serum levels in limestone mining worker

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Abstrak

Latar belakang: Pneumokoniosis merupakan kelainan akibat penumpukan debu di dalam paru sehingga menyebabkan timbulnya reaksi akibat pajanan debu tersebut didalam jaringan yang dinamakan sebagai fibrosis. Pekerja tambang kapur termasuk ke dalam daerah pertambangan yang diketahui memiliki risiko tinggi terkena pajanan debu silika. Serum surfactant protein D (SP-D) akan meningkat pada pekerja yang terpajan silika sehingga hal ini menjadikan penanda hayati ini mungkin dapat digunakan sebagai alat pendeteksi dini penyakit paru akibat kerja.
Metode: Penelitian potong lintang ini menggunakan penghitungan sampel secara consecutive sampling pada bulan November 2018-Maret 2019 pada 71 subjek penelitian yang bekerja di area pertambangan dan penggilingan batu kapur. Pemeriksaan kadar serum SP-D menggunakan metode ELISA.
Hasil: Pada penelitian ini didapatkan karakteristik penelitian pekerja tambang kapur didominasi oleh jenis kelamin laki-laki dengan median umur 42 tahun, status pendidikan terbanyak sekolah dasar, mayoritas telah bekerja <6 tahun dan bekerja >8 jam dalam sehari, mayoritas pekerja tidak menggunakan masker, status gizi pekerja mayoritas normal, pekerja terbanyak pernah merokok, kadar debu perusahaan tertinggi 223,30 mg/m3 dan lokasi pekerja bekerja mayoritas di area tambang kapur.
Kesimpulan: Kadar serum surfactant protein D (SP-D) pada pekerja tambang kapur memiliki median yaitu 45,40 (2,81-449,15) ng/mL.
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Background: Pneumoconiosis is a disorder that occurs due to the accumulation of dust in the lungs which causes a tissue reaction to the dust, the main reaction due to dust exposure is fibrosis. Limestone mining workers are who is high risk to get occupational disease of the lung caused by silica dust. Surfactant protein D serum level increased in silica dust exposed workers. Surfactant protein D serum may be useful as biomarker for early detection in occupational lung disease.
Method: Design of this study was observational with cross sectional. Sampling of limestone mining workers was done by consecutive sampling. Total subject was 71, approach population of limestone exposed workers from November 2018-March 2019. SP-D serum levels was measured by ELISA method. Limestone exposed mining workers are worker in quarry and miller area. Results:. This study found that characteristic subjects dominated by male with the median of age was 42 years old and last education mostly elementary school. Majority duration of working <6 years and time working in a day >8 hours perday. The limestone mining workers mostly did not wore mask and had normal weight group. Majority limestone mining workers ever smoking. The highest dust level was 223.30 ng/m3 and the location of limestone mining workers mostly in quarry area. Conclusion: The SP-D serum levels in limestone mining workers had median 45,40 (2,81-449,15) ng