

Hubungan pajanan partikulat debu terhadap kejadian rinitis akibat kerja dengan biomarker eosinofil kerokan mukosa hidung pada pekerja di area parkir basement = Association of particulate dust exposure with the incidence of occupational rhinitis using eosinophils nasal mucosal scrapings as biomarker among basement parking area workers

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Abstrak

ABSTRAK
Prevalensi Rinitis Akibat Kerja (RAK) berkisar antara 5-48%. Penyebab RAK antara lain adalah partikulat debu yang beterbangan di lingkungan kerja. Hal ini akan meningkatkan beban pembiayaan baik terhadap pekerja itu sendiri maupun perusahaan tempat ia bekerja. Penelitian ini bertujuan untuk mengetahui prevalensi RAK serta hubungan antara kadar partikulat debu dengan kejadian RAK dengan populasi pekerja parkir basement di sebuah Hotel dan RSUD di Jakarta dengan waktu pengumpulan sampel dilakukan selama bulan Desember 2014 hingga Maret 2015. Sampel penelitian adalah yang memenuhi kriteria inklusi yakni area kerja di parkir basement, usia 20-40 tahun, masa kerja lebih dari 1 tahun dan bersedia mengikuti prosedur penelitian. Subyek penelitian di wawancara dan diperiksa kadar eosinofil kerokan mukosa hidung sebelum dan sesudah bekerja. RAK positif apabila terdapat gejala rinitis, memberat ketika bekerja dan ada peningkatan eosinofil kerokan mukosa hidung. Analisa penelitian dilakukan berdasarkan karakteristik usia, jenis kelamin, masa kerja, kebiasaan merokok dan bagian kerja (terpapar langsung atau tidak dengan partikulat debu). Dari 57 subyek penelitian, 6 orang (10.5%) mengalami peningkatan eosinofil dengan karakteristik sebagai berikut: 4 orang memiliki masa kerja > 4 tahun; 4 orang memiliki kebiasaan merokok; dan 3 orang bekerja di bagian kerja yang terpapar langsung dengan partikulat debu. Dari 6 orang tersebut terdapat 3 orang (5.2%) yang memenuhi kriteria RAK dengan karakteristik sebagai berikut: 2 orang berusia 30-40 tahun, 2 orang adalah laki-laki, 2 orang mempunyai masa kerja > 4 tahun, dan 2 orang berasal dari bagian kerja yang terpapar tidak langsung dengan partikulat debu. Terdapat hubungan bermakna antara riwayat atopi dengan peningkatan eosinofil (OR 23.33 dan 95%CI 2.40-224.62). Namun tidak ditemukan hubungan antara kadar partikulat debu dan masa kerja dengan RAK yang bermakna.

ABSTRACT
The prevalence of occupational rhinitis ranges between 5-48%. It is caused by particulate dust in the workplace. It will increase financial burden both for the workers themselves and the company. This study aims to determine the prevalence of OR and the relation between the levels of particulate dust with OR incident among workers who work in a hotel or hospital basement parking lot in Jakarta, during December 2014 to March 2015. The sample inclusion criteria were: age 20-40 years, working period of more than one year and are willing to

participate in the study. The subjects were interviewed and nasal mucosal scrapings eosinophil levels were measured before and after work. OR was defined as has symptoms of rhinitis, increase during work and there is an increase in eosinophils nasal mucosal scrapings. Analysis of the research carried out based on the characteristics of age, sex, years of smoking and working directly or indirectly exposed to dust particulates. Of the 57 subjects of the study, 6 (10.5%) experienced an increase in eosinophils with the following characteristics: 4 people has a work period > 4 years; 4 people smoke; and 3 people work directly exposed to particulate dust. Three subjects (5.2%) meet all the OR criteria with the following characteristics: 2 were aged 30-40 years, 2 were male, 2 have a working period of ≤ 4 years and 2 were indirectly exposed to particulate dust. There is a very significant association between history of atopy with increased eosinophils (, OR 23.3 and 95% CI 2.40-224.62). However, no association was found between levels of particulate dust and working period.;The prevalence of occupational rhinitis ranges between 5-48%. It is caused by particulate dust in the workplace. It will increase financial burden both for the workers themselves and the company. This study aims to determine the prevalence of OR and the relation between the levels of particulate dust with OR incident among workers who work in a hotel or hospital basement parking lot in Jakarta, during December 2014 to March 2015. The sample inclusion criteria were: age 20-40 years, working period of more than one year and are willing to participate in the study. The subjects were interviewed and nasal mucosal scrapings eosinophil levels were measured before and after work. OR was defined as has symptoms of rhinitis, increase during work and there is an increase in eosinophils nasal mucosal scrapings. Analysis of the research carried out based on the characteristics of age, sex, years of smoking and working directly or indirectly exposed to dust particulates. Of the 57 subjects of the study, 6 (10.5%) experienced an increase in eosinophils with the following characteristics: 4 people has a work period > 4 years; 4 people smoke; and 3 people work directly exposed to particulate dust. Three subjects (5.2%) meet all the OR criteria with the following characteristics: 2 were aged 30-40 years, 2 were male, 2 have a working period of ≤ 4 years and 2 were indirectly exposed to particulate dust. There is a very significant association between history of atopy with increased eosinophils (, OR 23.3 and 95% CI 2.40-224.62). However, no association was found between levels of particulate dust and working period.;The prevalence of occupational rhinitis ranges between 5-48%. It is caused by particulate dust in the workplace. It will increase financial burden both for the workers themselves and the company. This study aims to determine the prevalence of OR and the relation between the levels of particulate dust with OR incident among workers who work in a hotel or hospital basement parking lot in Jakarta, during December 2014 to March 2015. The sample inclusion criteria were: age 20-40 years, working period of more than one year and are willing to

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