

Kadar Karbon Monoksida Udara Ekspirasi pada Perokok dan Bukan Perokok serta Faktor-Faktor yang Mempengaruhi = Exhaled Air Carbon Monoxide Levels in Smokers and Non Smokers as well as The Factors that Influence

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Abstrak

[PENDAHULUAN

Merokok dianggap sebagai sumber utama pajanan terhadap karbon monoksida (CO). Pemeriksaan kadar CO udara ekspirasi dapat digunakan sebagai biomarker status merokok. Metode ini mudah dilakukan, non invasif dan menimbulkan kepatuhan yang lebih baik bagi pasien. Penelitian ini bertujuan untuk mengetahui kadar CO udara ekspirasi pada perokok dan bukan perokok sekaligus mengetahui kadar CO pada masing-masing jenis perokok terutama perokok kretek sebagai perokok mayoritas di Indonesia.

METODE

Penelitian potong lintang yang dilaksanakan pada Januari 2013 sampai Oktober 2013. Jumlah sampel sebanyak 125 orang yang terdiri dari 85 orang kelompok perokok dan 40 orang kelompok bukan perokok dipilih secara consecutive sampling. Dilakukan wawancara untuk mengisi kuesioner data dasar, kuesioner Fagerstorm dan skor Horn yang dilanjutkan dengan anamnesis, pemeriksaan fisis dan pengukuran kadar CO udara ekspirasi dengan menggunakan alat pengukur CO portabel (piCO+cSmokerlyzer Bedfont).

HASIL

Penelitian ini mendapatkan kadar CO udara ekspirasi pada kelompok perokok lebih tinggi dibandingkan kelompok bukan perokok dengan rerata kadar CO pada kelompok perokok sebesar 22 (4;48) ppm dan kelompok bukan perokok sebesar 5,83 + 1,82 ppm (p=0,000). Tidak didapatkan perbedaan kadar CO antara kelompok perokok kretek, perokok putih dan perokok campuran (22 + 10,96 ; 22,60 + 10,44 ; 21,43 + 11,72 ; p=0,943). Faktor yang paling berkorelasi terhadap kadar CO udara ekspirasi pada perokok adalah jenis kelamin, laki-laki cenderung memiliki kadar CO yang lebih tinggi dibandingkan dengan perempuan.

KESIMPULAN

Kadar CO udara ekspirasi pada perokok lebih tinggi dibandingkan bukan perokok serta tidak ditemukan perbedaan kadar CO diantara perokok kretek, perokok putih dan perokok campuran. Faktor yang paling berkorelasi terhadap kadar CO udara ekspirasi pada kelompok perokok adalah jenis

kelamin.;INTRODUCTION

Smoking has been considered as a prime cause of carbon monoxide (CO) exposures. Exhaled air CO measurement is a reliable indicator for smoking status. It is noninvasive, easy procedure and better compliance. The present study was undertaken to measure exhaled air CO levels in smokers and non smokers and also to measure exhaled air CO levels in clove cigarette (kretek) smokers as a majority smokers in Indonesia.

METHOD

This study used cross sectional method conducted from Januari 2013 until October 2013. A Total of 125 subject consist of 85 smokers and 40 non smokers selected based on consecutive sampling. Interview was done to fill out question about sociodemographic and smoking habit, Fagerstorm test for nicotine dependence

and Horn score for smokers profile if the respondent is smoker follow by anamnesis, physical examination and breath CO measurement using portable CO analyzer ((piCO+cSmokerlyzer Bedfont).

RESULT

Average exhaled air CO levels were 22 (4;48) ppm in smokers, significantly higher compared to non smokers with the level of exhaled air CO were 5,83 + 1,82 ppm (p=0,000). No significant difference was found (p = 0,943) in the distribution of CO readings of the clove cigarette smokers compared to white cigarette and mix cigarette smokers (22 + 10,96 vs 22,60 + 10,44 vs 21,43 + 11,72) ppm. Gender was the most correlated factor to exhaled air CO levels, men tend to have higher exhaled air CO levels compared to women.

CONCLUSION

Exhaled air CO levels in smokers is higher than non smokers whereas no significant difference in the distribution of breath CO readings between clove cigarette, white cigarette en mix cigarette smokers. The most correlated factor that influence CO levels is gender.;

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