

抽濃淡菸者尿中可丁尼濃度及呼吸系統健康效應之比較

Comparison with urinary cotinine levels and respiratory health effects between light and heavy smokers

中文摘要

近幾年來由於菸商之強力促銷，淡菸已漸漸成爲菸品市場中的主流商品，且吸菸者多相信吸淡菸的危害要比吸濃菸小得多，然而是否真的如此呢？

本研究目的主要探討國人吸菸者尿中可丁尼的濃度及呼吸系統健康效應與所使用菸品尼古丁濃度的關係。我們共收集 133 位自願受試者爲研究對象，每位受試者需填寫結構式問卷，以獲得吸菸者的吸菸習慣（菸品種類、每日吸菸量及吸菸年數等）和呼吸道健康現況資料及尼古丁依賴性，並於問卷施測後進行肺功能和呼出 CO 氣體測定，每位受測者均提供尿液以檢測尼古丁代謝產物—可丁尼濃度。

研究結果顯示，尼古丁依賴性與每日吸菸支數對尿中可丁尼濃度的影響最大，而與所使用的菸品濃度並無相關；吸菸者呼吸道症狀明顯多於非吸菸者，但吸淡菸者的呼吸道症狀並未少於吸濃菸者。由於尼古丁依賴性與尿中可丁尼濃度的高度相關，故尼古丁依賴性量表應可作爲一個良好的香菸危害暴露指標。

本篇研究結果強烈暗示淡菸使用者的菸品暴露危害，菸害防制相關單位應重視。

英文摘要

It is well known that smoking harms nearly every organ of the body, causing many diseases and reducing quality of life and life expectancy. Recent years, low-yield nicotine cigarettes become more popular than regular cigarettes because of the market promotion by tobacco industries. And moreover, many people believe that low-yield nicotine cigarettes are less hazardous than regular cigarettes. Is it really true that low-yield nicotine cigarettes are less hazardous?

The aim of this study is to identify the difference of urinary cotinine levels and prevalence of respiratory symptoms between low and high-yield nicotine cigarettes smokers. We collect 133 Taiwanese male adult subjects and divide to 4 groups according to their brand nicotine yield. Each subject filled out a self-administered questionnaire. Urinary cotinine concentrations, pulmonary function test and expired CO concentrations were also measured for every participant.

The result shows that nicotine dependence significantly increased urinary cotinine concentration regardless of the nicotine yield of brands. Significant differences in prevalence of respiratory symptoms were observed among smokers vs nonsmokers, but it can not find between low-yield nicotine smokers and regular

cigarettes smokers. The Fagerstr?m Test for Nicotine Dependence were highly correlated with urinary cotinine concentrations. It would be a good indicator of smoking hazardous exposure.

There are no significant differences of cotinine levels and respiratory symptoms were found between low-yield nicotine smokers and regular cigarettes smokers. We suggest the authorities of smoking control should strengthen the education for low-yield nicotine smokers.