Controlling Indoor Air Pollution from Moxibustion

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ABSTRACT

Indoor air quality (IAQ) control of hospitals plays a critical role in protecting both hospital staffs and patients, particularly those who are highly susceptible to the adverse effects of indoor noxious hazards. However, moxibustion in outpatient departments (OPDs) of traditional Chinese medicine (TCM) may be a source of indoor air pollution in hospitals. Some studies have investigated indoor air pollution during moxibustion in Chinese medicine clinics (CMCs) and moxibustion rooms, demonstrating elevated air pollutants that pose a threat to the health of medical staff and patients. Our study investigated the indoor air pollutants of indoor carbon dioxide (CO2), carbon monoxide (CO), formaldehyde (HCHO), total volatile organic compounds (TVOCs), airborne particulate matter with a diameter of ≤10 µm (PM10) and ≤2.5 µm (PM2.5) during moxibustion in an acupuncture and moxibustion room of the OPD in a hospital in Taipei. To evaluate the different control strategies for indoor air pollution from moxibustion, a comparison of air pollutants during moxibustion among the methods of using alternative old moxa wools, local exhaust ventilation and an air cleaner was conducted. In this study, burning alternative old moxa wools for moxibustion obviously reduced all gaseous pollutants except for aerosols comparing burning fresh moxa wools. Using local exhaust ventilation reduced most of the aerosols after burning moxa. We also found that using an air cleaner was inefficient for controlling indoor air pollutants, particularly gaseous pollutants. Therefore, combining replacing alternative old moxa wools and local exhaust ventilation could be a suitable design for controlling indoor air pollution during moxibustion therapy.

Keywords: indoor air quality; moxibustion; moxa wool; local exhaust ventilation; air cleaner

REFERENCES