

Is Medical Concern about Hookah Environmental Tobacco Smoke Hazards Warranted ?

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Abstract: This paper reviews the present knowledge about the nature of hookah (narghile, shisha) ETS and, in the light of the controversy over the actual health effects of cigarette ETS, concludes that the former should not be hyperbolised in an unscientific way as, unfortunately, a WHO report suggests.

Key Words: Smoking, tobacco, diseases, ETS (environmental tobacco smoke), hookah, shisha.

Environmental Tobacco Smoke in Italian and French literature:

« Qui venivano gli amici, e anch'essi si buttavano e, come diceva Muscarà, s'abbianu e sdavacàvanu, sui pagliericci e le ciambele di cuoio, rimpiendo presto la camera di un tale fumo di sigareta che, dal balcone socchiuso, i passanti vedevano uscire una sorta di lenzuolo grigio palpitante nell'aria. Fumo, caffè, e liquori... »

(Vitaliano Brancati, 1940)

« ...sous les treilles aux pampres frais, sous les glycines, sous les platanes; des narguilés par myriades, le long des rues, exhalaient leur fumée enjôleuse. »

(Pierre Loti, 1904)

A Tribute to Gian Turci

INTRODUCTION

Hookah (narghile, shisha) smoking is seen as a global tobacco epidemic and there is definitely a lack of sound studies on the hazards related to its active smoking [1]. Amazingly, and as if hookah and cigarette smoking were similar, more and more biomedical publications report hazards related to its ETS (environmental tobacco smoke).

Not only is the model of cigarette smoking irrelevant but it has proved to be highly controversial. In the USA, Enstrom and Kabat found no causal relation between ETS and mortality related to smoking [2]. The publication of the corresponding results raised so many adverse reactions that the first author felt he had to publish a defence of them [3]. More recently, in Europe, the situation has reached the point that a not less renowned scholar literally asks about an official supranational public health report that has remained un-commented for years: "Epidemiological Study or Manipulation?". The scientist was amazed by official statistics reporting a large increase of the death toll related to passive smoking in Europe. He found that among the 5863 estimated deaths, 4749 concerned everyday smokers. Furthermore, the 1114 "non-smokers" included all former smokers as well. Obviously, the remaining risk of the latter cannot be attributed to ETS [4].

Unfortunately, the concern over hookah ETS has been growing in such a context and has apparently found its fuel there. A World Health Organisation expert report states that

"second-hand smoke from waterpipes [...] poses a serious risk for non-smokers" [1, 5]. Such a statement is supported by a publication of the US-Syrian Centre for Tobacco Studies and the report was co-authored by two members of the latter. More recently, a review published by an international team of researchers has echoed the same motto [6].

Unfortunately, if, in cigarettes, ETS is a "sum" of EMS (Exhaled Mainstream smoke) and SSS (Side-Stream Smoke), the situation is completely different with hookah smoking because this kind of pipe generates almost no SSS (Figs. 1 and 2). The main reason is that the tobacco-molasses based mixture is not burnt as in cigarettes but only heated whereby temperatures barely go beyond 150°C or 200°C [1, 7]. ETS in hookah smoking is actually reduced to EMS to a great extent, i.e. to a smoke whose toxicity is very low because it has undergone extra filtration in the respiratory tract in which on average, 60–80% of the particulate matter is retained [8]. The percentages for volatile aldehydes and polycyclic aromatic hydrocarbons are even higher. As for carbon monoxide, generated by the charcoal, a reference study shows that expired mean CO levels in non-smokers exposed to hookah smoke virtually do not vary [9]. Finally, in order to help clearing up confusion, it is worth recalling that hookah smoke is far less complex than that generated by cigarettes. Indeed, there would be one or a few hundred compounds in the former [10]. By comparison, the latter has been thoroughly studied so far and contains about 4,700 compounds [8].

CONCLUSION

The hazards of cigarette ETS have been widely hyped as prestigious scholars have shown [2, 4]. Concern about those

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Fig. (1). Poster of the French INPES (Institut National pour la Prévention et l'Éducation à la Santé). This visual aid was used during the 2005 “World Not Tobacco Day” campaign sponsored by the WHO. It shows a huge cloud of dense smoke (supposedly “ETS”) stemming from a hookah and featuring the spectrum of death. Unfortunately, a hookah does not generate such a side-stream smoke.

from hookah ETS is even more unwarranted in the light of the state-of-the-art science.

COMPETING INTERESTS

The author has no competing interests to declare. He has unfortunately never received direct or indirect funding either from pharmaceutical companies (nicotine “replacement”

therapies and products) or from the tobacco industry. Ten years ago, he measured CO levels in French hookah lounges and issued recommendations that, unfortunately for the world public health, were never taken into account. For this reason, he participated, from Spring to Autumn 2004, in the development of a No-CO harm reduction patented hookah which cuts down CO by 95%. He signed away all his rights

on June 15, 2005. He began to publish studies in peer-reviewed biomedical journals only beyond that date.

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Fig. (2). Cover of the American Lung Association's report on "waterpipe". It shows a small-size hookah generating SSS on its own. Unfortunately, a hookah does not generate such a side-stream smoke.

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