

Waterpipes: A Misconception

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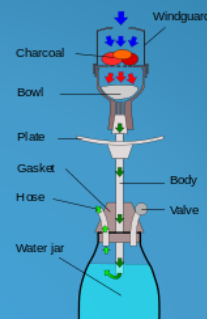
Case Report:

25 year old female with a history of migraines, depression complaining of a severe headache, atypical of her migraines, and feeling unsteady with ambulation. She was smoking a hookah in her house with her friends for the past three days.

Labs were significant for
Carboxyhemoglobin: 35.8%

She was transferred to the Hospital of the University of Pennsylvania for Hyperbaric Oxygen Therapy.

On arrival, her symptoms improved and her neurological exam was unremarkable. She tolerated a standard Weaver protocol for acute CO poisoning with no issues.



Discussion:

Waterpipes, also known as a hookah, are becoming more popular. A study from one college campus showed that 48% of surveyed first-year college students used a waterpipe at some time in the past.¹ The same study showed that students who used a waterpipe in the past 30 days were less likely to feel that it is as harmful as cigarette smoking compared to their peers who have never used a waterpipe.¹

“Tobacco-free” products for the hookah are marketed as not having the harmful effects associated with tobacco. It has been shown that the CO and other toxic agents levels remain unchanged in these products.² It is felt that this is contributed to by the use of charcoal. The waterpipe uses heated charcoal to cause the tobacco product to burn, creating a combined source of smoke from the charcoal and tobacco.

The average CO exposure during a waterpipe smoking session is 143mg compared to a single cigarette which ranges from 1 to 22mg.³ The increased CO level is likely secondary to the duration of exposure to the smoke.

We need to continue having discussions with our patients about avoiding cigarette smoking and smoking cessation; however, we also need to recognize that there are other significant tobacco-related health risks, such as waterpipes. Second-hand smoke from waterpipes contain toxic compounds from the tobacco, as well as, the charcoal. We must educate patients on the associated risks with smoking from a waterpipe, including carbon monoxide poisoning.

1. Eissenberg T, et al. Waterpipe tobacco smoking on a U.S. college campus: prevalence and correlates. J Adol Health 2008;42:526-529

2. Shihaden A, et al. Does switching to a tobacco-free waterpipe product reduce toxicant intake? A crossover study comparing CO, NO, PAH, volatile aldehydes, tar and nicotine yields. Food Chem Tox 2012;50:1494-1498.

3. Shihaden A, Saleh R. Polycyclic aromatic hydrocarbons, carbon monoxide, “tar”, and nicotine in the mainstream smoke aerosol of the narghile water pipe. Food Chem Tox 2005;43:655-661.