

Clinical Communications: Adults



CARBON MONOXIDE POISONING CAUSED BY WATER PIPE SMOKING: A CASE SERIES

Mischa Veen, MD

Emergency Department, Medical Centre Haaglanden, The Hague, The Netherlands

Reprint Address: Mischa Veen, MD, Emergency Department, Medical Centre Haaglanden, Westeinde, PO Box 432, 2501 CK, The Hague, The Netherlands

Abstract—Background: Carbon monoxide-related symptoms caused by water pipe smoking may be a frequent occurrence. This might often be overlooked, because patients will not always identify the smoke exposure as the cause of their presenting complaints and may well withhold this information. **Case Report:** A series of three patients who were 15 to 28 years of age presented to the emergency department with nonspecific symptoms and were found to have carbon monoxide poisoning from water pipe smoking. **Why Should an Emergency Physician Be Aware of This?:** This case series might improve recognition of this phenomenon. Carbon monoxide poisoning can cause serious problems, yet it could be easily diagnosed and treated. Identifying this condition can expedite treatment and prevent unnecessary diagnostic tests in an attempt to explain its symptoms. © 2016 Elsevier Inc. All rights reserved.

Keywords—carbon monoxide; shisha; water pipe

INTRODUCTION

Water pipe (WP) smoking is an Eastern Mediterranean tradition that dates back centuries (1,2). A WP may be referred to as a “narghile,” “shisha,” “hookah,” “goza,” or a “hubble bubble” (1–4).

This habit is practiced by millions worldwide, and current use in Southwest Asia through North Africa ranges from 20% to 45% (1,2,5). WP smoking has exploded in popularity since the early 1990s, particularly among

youth (5). Countries such as Estonia, Denmark, and South Africa report that there is a growing pandemic because WPs have become readily available in bars and shops (Figure 1) (5,6).

This case report discusses three severe presentations of symptomatic carbon monoxide (CO) poisoning after WP smoking seen in our emergency department (ED) over an 8-month period.

CO poisoning is a common source of accidental poisoning and results in more than 50,000 ED visits per year in the United States (7). It is typically seen in colder climates or seasons and associated with smoke exposure by fire, exhaust fumes, home water heaters, and tobacco smoke. A history of potential CO exposure is therefore the most reliable indicator of poisoning (1,8). However, these cases highlight the importance of considering CO exposure in patients presenting with nonspecific symptoms to the ED (1).

CASE REPORTS

Case 1

A 15-year-old male of Mediterranean descent presented to the ED with a headache, nausea, and vomiting. The patient reported that he had smoked a WP for 1.5 hours before the onset of symptoms.

His vital signs included a respiratory rate of 22 breaths/min and a pulse oximetry reading of 100%.



Figure 1. Waterpipes on display in the window of a common Dutch tourist shop.

Physical and neurologic examinations were unremarkable. An arterial blood gas (ABG) sample revealed a carboxyhemoglobine (COHb) level of 25%. He was treated with high-flow oxygen using a nonrebreather mask (NRM); after 2 hours, the COHb level had decreased to 7.4%.

He was admitted overnight and discharged the following day without additional complications.

Case 2

A 16-year-old female of Mediterranean descent presented to the ED by ambulance with dizziness, nausea, and shortness of breath. There was no history of substance abuse. She had been treated with high-flow oxygen by paramedics.

Before the onset of symptoms, she had been smoking a WP for 60 minutes, which she did not reveal until specifically asked. Her vital signs included a respiratory rate of 65 breaths/min and a pulse oximetry reading of 100%. There was an initial tachycardia (128 beats/min) and normal blood pressure. The physical examination was normal, and an ABG sample showed a COHb level of 26.6%. She was admitted and continued to be treated with high-flow oxygen.

The COHb level had dropped to 0.3% by the next morning, and she was discharged in good condition.

Case 3

A 28-year-old man of Mediterranean descent presented to the ED after having suffered two syncopal episodes.

He complained of dizziness that had begun in a shisha bar where he typically smokes WP for several hours every other day. He suffered two syncopal episodes after going outside for some fresh air, with only a brief loss of consciousness. Both episodes were witnessed. No twitching or jerking of the limbs had been observed, and the patient recovered quickly. He vomited twice after regaining consciousness. His symptoms had completely resolved upon arrival to the ED.

The physical examination was unremarkable. Hypoglycemia was ruled out, and an electrocardiogram was normal. An ABG analysis showed a COHb level of 39.2%. High-flow oxygen was initiated by NRM. In view of the syncope and the high COHb level, transport to a facility with a hyperbaric oxygen chamber was

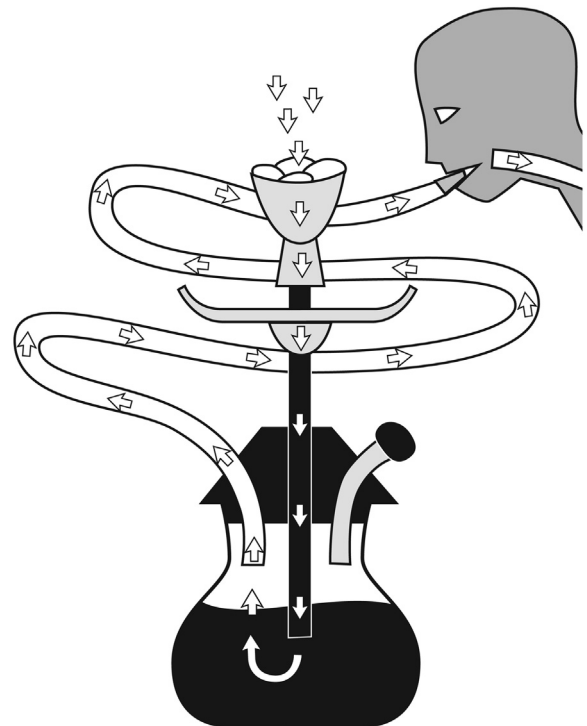


Figure 2. Schematic illustration of a waterpipe. In a common waterpipe configuration, perforated aluminium foil separates burning charcoal from tobacco in the head of the waterpipe. The head is attached to a water bowl by a submerged tube. Drawing air through a mouthpiece and hose attached to the unsubmerged half of the bowl produces a vacuum in the air-filled space of the water bowl. This vacuum causes smoke to bubble through the water, whereupon it is inhaled.

Download English Version:

<https://daneshyari.com/en/article/3245640>

Download Persian Version:

<https://daneshyari.com/article/3245640>

[Daneshyari.com](https://daneshyari.com)