AMERICAN JOURNAL OF INDUSTRIAL MEDICINE 54:911–914 (2011)

Case Report

Acute Respiratory Distress Associated With Inhaled Hydrocarbon

Kathryn W. Weibrecht, MD* and Sean H. Rhyee, MD, MPH

Background *Pneumonitis is a well-known complication following aspiration of ingested liquid hydrocarbons. There are few data about acute pulmonary toxicity from unintentional hydrocarbon inhalation; most human cases involve products containing a fluoropolymer in combination with hydrocarbons.*
Methods *Case report of a 45-year-old male who presented with respiratory distress after a 15-min inhalational exposure to a canvas waterproofing spray containing liquefied petroleum gas, ethylene glycol monobutyl ether, and isopropanol.*
Results *Patients had symptoms, exam findings, and chest X-ray that were consistent with an acute pneumonitis.*
Conclusion *Acute pulmonary injury can occur after a short exposure to an inhaled hydrocarbon and associated symptoms appear to respond to supportive measures, including oxygen, corticosteroids, and bronchodilators.* Am. J. Ind. Med. 54:911–914, 2011. © *2011 Wiley Periodicals, Inc.*

KEY WORDS: pneumonitis; hydrocarbons; liquefied petroleum gas; pulmonary toxicity; respiratory distress

INTRODUCTION

Pneumonitis is a well-known complication of liquid hydrocarbon aspiration [Eade et al., 1974; Bratton and Haddon, 1975; Victoria and Nangia, 1987]. In contrast, there are limited data concerning pulmonary toxicity from occupational hydrocarbon aerosol exposure. Multiple authors have reported acute lung injury in humans and animals after accidental inhalation of waterproofing agents containing hydrocarbons; however, these products also contained fluoropolymers [Laliberti et al., 1995; Yamashita and Tanaka, 1995; Jinn et al., 1998; Daubert et al., 2009]. Direct pulmonary toxicity from inhalant abuse is rarely reported, though when identified is associated with halogenated hydrocarbons [Schloneger et al., 2009]. In this report we describe a case of acute pulmonary toxicity from accidental inhalation of a hydrocarbon aerosol product, without a fluoropolymer or halogenated ingredient.

CASE REPORT

A 45-year-old man presented to the Emergency Department (ED) with respiratory distress 2 hr after a 15-min accidental exposure to aerosolized Meguiar's Marine Canvas Protectant. Active ingredients were liquefied petroleum gas [1–10% weight/volume (w/v)], isopropanol (1–3% w/v) and ethylene glycol monobutyl ether (EGBE, 1–3% w/v). He was waterproofing canvas on his boat in a small, enclosed garage, and began coughing 30–45 min later. Over the next 2 hr, he experienced lightheadedness,

Division of Medical Toxicology, Department of Emergency Medicine, University of Massachusetts Medical School, Worcester, Massachusetts

Dr. Rhyee was recently a paid consultant for Teva Neuroscience (Kansas City, MO). The subject of his contract with Teva Neuroscience in no way relates to the topics in this article.

Disclosure Statement: The authors report no conflicts of interests.

*Correspondence to: Kathryn W. Weibrecht, MD, Division of Medical Toxicology, Department of Emergency Medicine, University of Massachusetts Medical School, 55 Lake Ave., Worcester, MA 01655. E-mail: weibreck@ummhc.org

Accepted 20 June 2011
DOI 10.1002/ajim.20989. Published online 27 July 2011 in Wiley Online Library (wileyonlinelibrary.com).

© 2011 Wiley Periodicals, Inc.