

Finding Needles in a Haystack: A Case Series of Carbon Monoxide Poisoning Detected Using New Technology in the Emergency Department.

Chee K.J., Nilson D., Partridge R., Hughes A., Suner S., Sucov A., Jay G. *Clin Toxicol* 2008 Jun;46(5):461-9.

Introduction

The diagnosis of carbon monoxide poisoning can be difficult because the symptoms are nonspecific and may mimic other illnesses. If carbon monoxide poisoning is suspected, the standard test at this time is venous or arterial carboxyhemoglobin levels. A new device, the Rad-57 Pulse CO-Oximeter (Masimo Corp.) can measure carboxyhemoglobin levels noninvasively at emergency department triage.

Methods

The pulse CO-oximeter was utilized in our emergency department triage to measure carboxyhemoglobin levels on all patients. A retrospective chart review was then conducted to identify all patients with elevated levels.

Case Series

Out of an estimated 74,880 patients who had their SpCO measured and documented at triage, seven patients who presented with vague complaints were diagnosed with occult carbon monoxide poisoning. Their diagnosis was facilitated by the noninvasive Pulse CO-Oximeter, which measured their carboxyhemoglobin levels when the standard vital signs were also documented at triage.

Conclusions

The noninvasive Pulse CO-Oximeter could be a major triage tool for identifying unsuspected carbon monoxide poisoning among patients with nonspecific symptoms.