Pulse Oximetry in Carbon Monoxide Poisoning

Key words: carbon monoxide poisoning (CO), supraventricular tachycardia (SVT), pulse oxymeter, carboxyhemoglobin (COHb), co-oximeter

To the Editor I read with interest the case presented by Cetin et al. (1) published in your journal. They reported, for the first time, a case of acute carbon monoxide (CO) poisoning presenting with supraventricular tachycardia (SVT). The authors stated that, during the initial assessment of the patient, O2 saturation was 97% by pulse oximeter. This brings up a very important issue in the setting of CO poisoning which the authors did not address in the article’s discussion. It is important to point out that because of the similarities in the extinction coefficients, most standard pulse oximeters are unable to differentiate between the standard oxyhemoglobin molecule and the toxic carboxyhemoglobin (COHb) molecule, resulting in misleading falsely high or normal oxygen saturations in the setting of CO poisoning (2, 3). The typical means of COHb analysis is a co-oximeter, a device that spectrophotometrically reads the percentage of the total hemoglobin saturated with CO (4). Thanks for this interesting article.

The author states that he has no Conflict of Interest (COI).

Hossein Sanaei-Zadeh

References