Carbon monoxide concentrations in the 2009 Victorian Bushfire disaster victims

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Blood was available for the estimation of carboxyhemoglobin saturation (COHb) in 30 of the 173 persons who died in the Victorian bushfires in February 2009. The ages of these 30 deaths ranged from 3 to 80 years and there were 8 females. 13 cases (43%) were considered negative (less than 5% COHb), 12 (40%) were between 5 and 40% COHb, 2 (6.7%) between 40 and 50% and 3 (10%) were greater than 50% COHb. There were 6 persons either found within a building or a car and the COHb in these cases ranged up to 69% (mean 50%). There were 5 cases where the location was unable to be determined as either indoor or outdoor due to the extensive nature of the fire. The remaining 19 deceased persons were all located outside in the open and the concentration of COHb in these cases ranged up to 30% (mean 19%). Hydrogen cyanide was only detected in two deceased persons at concentrations of 0.5 and 2.7 mg/L, respectively. 13 deceased were found to have soot in the airways following necropsy but this did not correlate with the COHb levels.

type: journal paper/review (English)
date of publishing: 19-11-2010
journal title: Forensic Sci Int (205/1-3)
ISSN electronic: 1872-6283
pages: 69-72