

acute neurologic manifestations, or (4) nontoxic when COHb was $\leq 10\%$ without acute neurologic manifestations. Of 106 cases (median age of 3.5 years; range of 0.1 to 14.9 years) investigated, 37 had exposures that were severely toxic, 37 were toxic, 13 were suspected toxic, and 19 were nontoxic. The most common presenting symptoms included altered level of consciousness (lethargy, unresponsiveness), metabolic acidosis, tachycardia and hypertension. All exposures were accidental, occurring as a result of smoke inhalation during house fires in 95 cases, motor vehicle exhaust in six cases, and defective heating system in five cases. Forty-three children had an associated cutaneous burn injury. All patients received normobaric oxygen for a median period of 5.5 h (range 0.6 to 44 h). Fifteen patients died, eight from hypoxic-ischemic encephalopathy after cardiopulmonary arrest at presentation, three from massive burn injury, and four from late complications of burn injury. Nine survivors suffered neurologic sequelae: (1) six had persistent deficits, such as cognitive and motor deficits or developmental delay (of these, four had presented with respiratory or cardiorespiratory arrest with COHb concentrations of 31.5% to 45%, and the other two had COHb concentrations of 14.8% and 5.9% and had severe burns with 40% and 75%, respectively, of the body-surface area affected), and (2) three patients developed delayed neurologic syndromes (two children had COHb concentrations of 33.3% and 34.8% with transient tremors, cognitive deficits, and hallucinations starting after 4 and 14 days that resolved spontaneously after about 2 months; and one child had a COHb of 3.1% and developed deficits in cognitive and interpersonal skills after 51 days and in whom brain imaging revealed bilateral occipital lobe infarcts).

Further information on pediatric CO poisoning can be found in the review of White (2000).

2.2.2.2. Adults

Burney et al. (1982) reported an epidemiologic and clinical investigation of 184 persons exposed to CO in a public school. CO release was from a furnace and was caused because of a door to the exhaust chamber had been inadvertently left ajar. The CO was distributed throughout the school building by a forced air heating system. Exposure began at 7.30 a.m. and ended at 10.00 a.m. Of the 184 exposed persons (146 students and 38 teachers, mean age for all exposed was 20 years), 160 became ill and 96 were transported to four hospitals for treatment. COHb levels were measured on 66 persons and showed a mean of $18.2 \pm 6.4\%$, with almost half falling between 21% and 25%. Persons in whom COHb levels were drawn had a mean exposure time of 107 ± 33 min. Of the 160 persons who became ill, the following symptoms were reported for 159 persons: headache (90%), dizziness (82%), weakness (53%), nausea (46%), trouble thinking (46%), shortness of breath (40%), trouble with vision (26%), and loss of consciousness (6%). For headache, dizziness, muscle weakness, trouble with vision and trouble with thinking, a strong correlation between symptom and duration of exposure