Carbon Monoxide Poisoning

Visual loss as a late complication of carbon monoxide poisoning and its successful treatment with hyperbaric oxygen therapy.


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PURPOSE: To present recovery from vision loss due to CO poisoning with Hyperbaric Oxygen (HBO) therapy in two patients. METHODS: Two female patients developed visual deterioration after carbon monoxide (CO) poisoning and were treated with hyperbaric oxygen therapy (HBO). Clinical examination, including visual acuity assessment, visual field examination and visual evoked potentials (VEPs) before and after the HBO therapy were performed. RESULTS: In Case 1 the visual loss started on the third day with visual acuity at the level of perception of hand movements at 10 cm in the right eye and finger count at 10 cm in the left eye. The visual evoked potentials (VEPs) had low amplitudes and prolonged (128 msec bilaterally) latencies (implicit times). After 48 sessions and 52 days of HBO therapy, the visual acuity became 0.2 in the right eye and 0.15 in the left eye. Visual field examination revealed homonymous right lower quadrant anopsia. The VEPs also improved. In Case 2 the visual acuity was 0.2 in the right eye and 0.1 in the left eye on the 6th day following the accident when the patient was admitted for treatment. The VEP latencies were within normal limits. After 36 days and 35 sessions of HBO therapy, the visual acuity became 0.7 on both eyes. The visual fields completely normalised. The VEP latencies in this case also became shorter.

CONCLUSION: It appears that the adverse effects of CO poisoning continue to progress during the late period and we believe that HBO treatment in this period may still be effective and will prevent some of the neurological sequelae such as visual loss from becoming permanent. Clinical, neurological, neuropsychological, visual outcome seems to be favourable even if HBO treatment started as late as 6 or 8 days after the exposure to CO.

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