

Seizure Following Hyperbaric Treatment for Decompression Sickness

Bodwin DM, Dunn SL, Holm JR. Virginia Mason Center for Hyperbaric Medicine, Seattle, Washington.



I BACKGROUND

Oxygen toxicity seizure is a recognized side effect of hyperbaric oxygen treatment. We report the case of a patient who experienced a seizure-like event followed by hours of confusion, approximately 10 minutes after completing a USN Table 6 for decompression sickness.

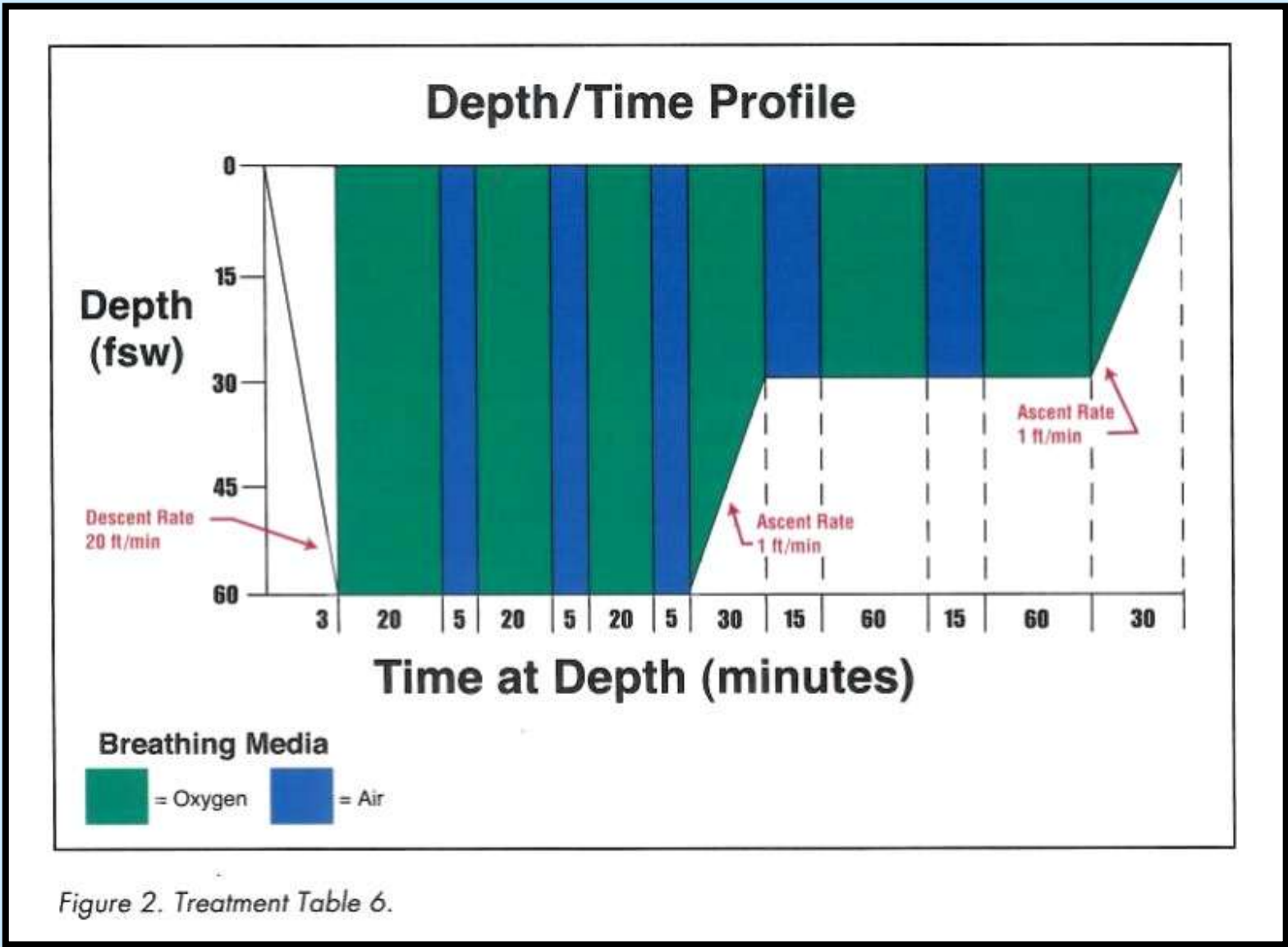
II CASE PRESENTATION

An experienced 53-year-old diver completed two uneventful, no-decompression dives on 32% nitrox using a dive computer. She had a maximum depth 90' for 73 minutes and a second dive to 79' maximum for 65 minutes, with a 109 minute surface interval. Within an hour of completing the dives, she developed weakness, hip pain, epigastric discomfort, nausea, and vomiting. Oxygen and IV fluids were administered and she was transferred to a local ED where she received IV ondansetron and ketorolac. Evaluation showed no other cause for the symptoms. The patient was transferred to our facility for treatment of decompression sickness. She received a USN Table 6 with 2 extensions at 60' without incident and all symptoms resolved

Ten minutes after leaving the chamber, she became acutely altered and developed unresponsiveness followed by confusion and combativeness for several hours. CT, MRI, toxicology screen, LP, laboratory tests, EEG and neurologic consultation were notable only for serum sodium 123. She was hospitalized and fluid restricted with normalization of neurologic status and serum sodium within 36 hours.

III DISCUSSION

In the absence of an alternate explanation, the patient was felt to have had a seizure contributed to by hyponatremia. The patient described drinking “lots of water” throughout her prehospital and ED course. Serum sodium was 134 at the initial ED 12 hours earlier. She was documented to consume 2,200 ml of water during her hyperbaric treatment. We believe that excessive consumption of free water caused transient hyponatremia, leading to a seizure-like event.



IV CONCLUSIONS

We encourage rehydration with electrolyte-containing solutions and avoidance of excessive free water during management of decompression sickness in an effort to avoid this rare complication.