Diagnosis and treatment of neurological decompression sickness- A report of two cases

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Neurological decompression sickness (DCS) is a rare condition that may lead to serious spinal cord injury and sometimes brain injury. We herein report two cases of neurological DCS treated with a combined methods of steroids, hyperbaric oxygen therapy (HBOT), acupuncture and physical therapy. First diving fisherman was a 53-year-old man who developed mental confusion, weakness and numbness over both upper limbs, paraplegia and difficulty urination after a dive to a maximum depth of 38 meters with a total dive time of 60 minutes. The MRI of brain showed multiple acute infarctions of brain. The second diving fisherman was a 45-year-old man who developed chest and back pain, weakness and numbness over right upper limb and both lower limbs with difficulty urination after a dive to 52 meters for 40 minutes. The MRI of spine showed focally increasing signal intensity change of C4-C5 spinal cord region on T2WI. Both cases received one United States Navy (USN) treatment table 6A and one Modified USN table 5A initially and HBOT for 21 sessions and 16 sessions, respectively. The plasma expander and steroids were given before the HBOT. The physical therapy and acupuncture were also applied for rehabilitation of neural function. After discharge, the first case could stand up but still need the help of wheelchair and the second could walk for some distance. Both cases had improvement of urination and defecation. In conclusion, the early examination of MRI for DCS cases with marked neurological symptoms and signs sometimes may show positive findings of brain or spine MRI and a combined method of steroids, HBOT, acupuncture and physical therapy may be useful in the treatment of neurological DCS.

Biography

Hui-Chieh Lee completed his MD from the National Defense Medical University in 1978 and Undersea Medical Officer Training in Groton USA, in 1979. He had served as the Chief, Dept. of Diving Medicine, Zuoying Naval General Hospital, Taiwan for 10 years and became the President of Hyperbaric and Undersea Medical Association, R.O.C. from 2008 to 2012. Currently, he is the Executive Director of Asian-Pacific Undersea and Hyperbaric Medical Society. He has published 30 papers in the Chinese and International Journal.

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