

Decompression sickness in an Indian diver

Sir,

We read with extreme interest the case report 'Decompression Sickness (Caisson Disease) in an Indian Diver'^[1] and the Letter to Editor titled 'Decompression Syndrome, ear – plug and barotrauma'.^[2] We wish to congratulate the authors for highlighting extremely pertinent issues related to this occupational hazard of divers and aviators. We, as diving physicians of the armed forces, have the following observations for the kind consideration by the authors:-

The most important predisposing aspect in a dysbaric illness is the pattern of exposure to the elevated pressure (or decreased pressure in an aviation or space scenario). In this case the dive profile of the diver has not been delved into. This pattern of the depth to which the diver descended, the time ("bottom time") spent there and the rate of ascent with the "decompression stoppages" as well as the number of times he dived and the intra dived duration on the surface (the Inter Dive Surface Interval) would have yielded relevant clinical background^[3] to arrive at the diagnosis early in the course of the illness. Also, it is pertinent find out the history of the type of gas mixture breathed (compressed air or Nitrox), the diving equipment used (open circuit or closed circuit and Surface supplied breathing gas or Self Contained Underwater Breathing Apparatus i.e. SCUBA) and any history of breath holding during ascent. These details would help in determining if there was any concurrent barotrauma or inert gas narcosis.

A diagnosis of bilateral sensory-neural deafness due to barotrauma has been made, however, no tympanic membrane findings have been described that are characteristic of aural barotrauma.^[4] It is possible that the diver would have sustained inner ear decompression sickness resulting in deafness as bilateral barotrauma is very rare indeed.

Decompression Sickness, as has been brought out well by the authors, is a clinical diagnosis and there is no role for MRI. The investigation that may help in the diagnosis is the Doppler bubble monitoring using several scales such as the Kisman Masurel Severity Score.^[5] The remarks of the Turkish underwater physicians in the Letter to the editor^[2] regarding preventing aural barotrauma are very germane.

While there have been few reports in indexed journals of Indian divers sustaining DCS, there are multiple incidences of DCS among the armed forces divers/aviators. There is a network of recompression chambers catering for the decompression

requirements at Mumbai, Kochi, Bangalore and other places. These chambers are also available for civilian divers requiring recompression for DCS or Cerebral Arterial Gas Embolism (CAGE) and such treatments are being given on a regular basis. It would have been worthwhile to refer the diver to the nearest armed forces recompression chamber where definitive treatment of DCS could have been undertaken. Further, now several recompression chambers have started functioning in the civilian sector as well at Mumbai, Ahmedabad, Delhi and Trissur Regarding professional training of divers in India, the Naval Diving School at Kochi is training the armed forces as well as civilian divers in India and has been duly accredited by the International Maritime Contractors Association (IMCA), the international nodal body for commercial diving.

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References

1. Phatak UA, David EJ, Kulkarni PM. Decompression syndrome (Caisson disease) in an Indian diver. *Ann Indian Acad Neurol* 2010;13: 202-3.
2. Uzun G, Mutluoglu M, Senol MG. Decompression syndrome, Ear Plug and Barotrauma. *Ann Indian Acad Neurol* 2011;14: 226-7.
3. Vann RD. Mechanisms and risks of decompression. In: Bove AA, editor. *Diving medicine*. 4th ed. Philadelphia: W.B. Saunders; 2004. p. 127-64.
4. Hunter SE, Farmer JC. Ear and sinus problems in diving. In: Bove AA, editor. *Diving medicine*. 4th ed. Philadelphia: W.B. Saunders; 2004. p. 431-59.
5. Vann RD. Inert gas exchange and bubbles. In: Bove AA, editor. *Diving medicine*. 4th ed. Philadelphia: W.B. Saunders; 2004. p. 53-76.

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