

The diving doctor's diary

Tales from the South Pacific – diving medicine in Vanuatu

Richard Harris

Key words

Decompression illness, travel medicine, general interest

Although I borrowed my title from the famous book by James Michener, my story of two years as a doctor in the island nation of Vanuatu doesn't have quite the ring of romance and adventure as his classic tale. However, as an anaesthetist from Adelaide in South Australia, I have found that my time here has certainly turned out to be a great adventure for my family and me.

When the position of anaesthetist at Vila Central Hospital in Port Vila came up through AusAid (www.ausaid.gov.au), I was living the quiet life giving anaesthetics in private practice in Adelaide and working part-time in diving and hyperbaric medicine at the Royal Adelaide Hospital. A few months later I was working well outside my comfort zone in a developing country...a regular jack of all trades and a master of none.

Vanuatu relies heavily on the tourist industry for a large proportion of its GDP, and many of its visitors come here to scuba dive or otherwise enjoy the tropical waters. Several dive operators work the waters around Port Vila, catering for recreational scuba diving, which is strictly limited to 40-msw, single-tank, no-decompression dives on the numerous local reefs and wrecks (many of which are purpose-sunk artificial reefs).

In the northern island of Espiritu Santo, the famous shipwreck of the *SS President Coolidge* lies on a sand shelf from 20 msw at the bow to 70 msw at the stern. This site is unique in the world because the local diving code of conduct allows certified divers of any level to perform decompression dives using air to depths of 60 msw, as long as the dive operators assess them as competent to do so.

This competence is established by working slowly down the wreck to increasing depths and penetration during the divers' stay.

Human nature and financial pressures being what they are, this means that occasionally divers will find themselves out of their depth in terms of their qualifications and experience. Despite the potential for accidents that this scenario might project, only three deaths have ever occurred on the wreck (none of them whilst diving under the direct supervision of a dive shop), in the many thousands of dives that are performed here every year. In addition, only one or two episodes of decompression illness (DCI) present for treatment each year arising from *Coolidge* dives.

A small but steadily growing technical diving contingent visits the wreck each year, but at this stage only one of the dive shops caters for this group. Opportunity for live-aboard diving is very limited in Vanuatu, with only one operator running trips intermittently at the time of writing.

Aside from the recreational dive industry, a small amount of commercial diving takes place in Vanuatu. Inshore commercial dive operators do work on ships' moorings, sea walls and the like, free-diving fishermen collect sea cucumber, and a significant aquarium-fish industry owned by an offshore company uses local and Philippino divers to catch fish by hand using scuba and hookah equipment. I have had no professional dealings with these groups during my time in Vanuatu.

Port Vila is lucky enough to have a twin-lock hyperbaric chamber owned by Hyperbaric Health Services, and run by

the Australian-trained paramedics at Promedical (a private ambulance company). The chamber was formerly at the Alfred Hospital in Melbourne and will be well known to some. It started its new life in Vanuatu based on Espiritu Santo, but for lack of medical and technical staff it was moved to Port Vila. It is well maintained and staffed, and I felt very comfortable using it for the administration of hyperbaric oxygen treatment (HBOT) to 2.8 ATA.

In the past two years I have treated only five divers in the chamber (with a total of 15 treatments). Two of these had clinically significant spinal sensory-motor DCI, and both made a good recovery with appropriate first aid, extended USN Treatment Table 6, intravenous lignocaine (in one case) and follow-up HBOT treatments (repetitive 18.60.30).¹

As the chamber is not on the hospital grounds, the patient either stayed at a hotel between treatments or, in the case of the one diver given lignocaine, was admitted to the private medical clinic in Port Vila for monitoring. The majority of divers held DAN insurance and insurance-related delays were minimal, significantly reducing stress on the part of all involved. A further two divers were assessed as having mild, resolving decompression sickness (DCS) and were not treated, and three other divers were assessed as not suffering from DCS.

As a physician in diving medicine in Vanuatu, I was consulted by telephone on numerous occasions by local dive shops with fitness-to-dive queries. I was reluctant to see all the divers in question due to the voluntary nature of my diving medical work; however, I was happy to provide a telephone advice service. Naturally, without seeing the prospective divers myself the advice I gave was extremely conservative in nature. I did, however, see a number of

patients with injuries secondary to diving or swimming including ENT problems, marine envenomations and bites, fish poisoning and salt-water aspiration/near drowning.

Some cases of note that come to mind? There were several cases of ciguatera and scromboid poisoning. The red bass (*Lutjanus bohar*) is a prime culprit in Vanuatu. Two shark attacks occurred during my time, one fatal and one nearly so, two stingray envenomations, a moray eel bite and a variety of jellyfish stings. On a personal note, I had brushes with the magnificent sea urchin (*Asthenosoma ijimai*) and the devil stinger (*Inimicus caledonicus*). Both very painful and best avoided! Multiple coral cuts, producing ulcers despite the best of care, leave me with a nice collection of scars on my legs as a permanent reminder of my stay.

Sadly I leave the beautiful shores of Vanuatu in January 2006, returning to Australia to resume work as an anaesthetist. But I know I now have the taste for adventure, and I am already scheming about the next trip away!

Reference

1 Elliott D. Triage and management of diving accidents: the Phuket Workshop, November 2003. *SPUMS J.* 2004; 34: 40-5.

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