

Articles of interest reprinted from other journals

An investigation of ear trauma in divers including ear barotrauma and ear infection (Abstract only)

S E Mawle and C A Jackson

Abstract

A sample of 142 divers including technical, recreational and instructors were examined via postal questionnaire to determine prevalence of ear barotrauma, related barotrauma symptoms and middle ear infection. Sixty four percent of divers reported symptoms of barotrauma, which included pain (47.9%), temporary deafness with tinnitus (27.5%) and vertigo (9.9%). The prevalence of middle ear infection was present in over a third of the total sample (37.3%), and were significantly more prevalent in the left ear than the right ear ($p = 0.016$). Consistently wearing a hood when diving was associated with greater barotrauma symptoms than wearing a hood only in cold conditions ($p < 0.01$). A significant relationship was found between barotrauma symptoms and diver separation ($p < 0.01$), and the implications are discussed with relevance to the finding that nearly 27% of divers reported incidents involving separation from buddies when diving.

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Editor's Commentary:

Only 142 of 300 questionnaires were returned completed. Of these, over 70% of divers reported ear clearing difficulties at some time in their diving career. Using a weighting system, based on the number of years diving and the frequency with which they dived, 30 divers reported clearing problems more than 10% of the time, and in 10 this was on almost all dives. Some divers may have confused symptoms of ascent barotrauma with alternobaric vertigo, which is often not associated with barotrauma. No clear distinction is made between external and middle ear infections, all are reported as middle ear in origin. The infection rates seem surprisingly high for middle ear infections, adding to the suspicion that some of these may have been external infections. The association with wearing a hood is interesting, and the authors speculate on the possible causes for this association, most particularly tight fitting hoods. A similar investigation in Australasia would make a good SPUMS Diploma project for someone.

Key words

Ear barotrauma, ear infection, diving

The early days of hyperbaric research in Adelaide

Brian Hills

Key words

Diving, history, decompression illness, aviation, pearl divers

In 1963, as a young Senior Lecturer in the Department of Chemical Engineering at Adelaide University, I went over to the staff club one day for my usual lunch when it was my good fortune to sit next to the late Dr. Hugh LeMessurier. It was not long before we were enthralled in a discussion of how to prevent the formation of bubbles in divers and aviators which had much in common with my thesis topic of how unwanted bubbles formed in nylon melts during the spinning process. Hugh - or Lem, as we all called him - was a member of the Physiology Department funded by the Department of Civil Aviation (D.C.A.) and R.A.A.F. who had supplied a large hypobaric chamber located behind

the Medical School. This was seldom used because the vacuum pump was very large and noisy, but well do I remember entering it to have my minimum bends altitude determined as 23,000 feet.

When we first met, Lem had just returned from an expedition to Thursday Island where he had recorded depth vs time profiles for the decompression of pearl divers, some of which had led to the bends while others had not. It was clear that the then standard Haldane calculation method underlying the Royal Naval and U.S. Naval diving tables could not explain the different outcomes. This was clearly a fascinating intellectual challenge, and I soon switched the 'bubble' topic of my Ph.D. thesis from nylon melts to deep-sea divers.