

PULMONARY BAROTRAUMA DURING POOL TRAINING

Diving Medicine and Assessment Centre
4 Dodson Avenue
Milford, Auckland 10
New Zealand
19 February, 1991

The Editor,

I wish report a second case of pulmonary barotrauma and cerebral gas embolism sustained whilst undergoing scuba training.

An 18 year old female exchange student from Canada ascended rapidly from 4.5 m in June 1991. She had been having difficulty equalising her ears, inflated her buoyancy compensator, and shot rapidly to the surface. At the surface she felt short of breath, had chest discomfort and was dizzy and tired.

Her GP recognised the problem was diving related and referred her on for my assessment. Assessment was particularly difficult as she presented as a lethargic, giddy, young adult whose cerebral function was quite inappropriate for an exchange student when tested with memory, simple mathematical problems and general discussion. She was short of breath with some chest discomfort. She fell to the right with the Sharpened Romberg test and had some 2-beat nystagmus laterally. She was sent to the Royal New Zealand Navy recompression chamber for a trial of therapy. Both her impaired mentation and her balance improved after the first treatment. She was discharged following a further three treatments, at which time her mental function was regarded as normal.

This case demonstrates the difficulty of assessing a young person whose mental function is suddenly impaired, as judged by her friends (her family was not available). After recompression therapy her mental function, balance and nystagmus all returned to normal.

Allan F N Sutherland

DIVING MEDICAL CENTRE COURSES SCUBA DIVING MEDICAL EXAMINATIONS

Courses will be conducted to instruct medical practitioners in diving Medicine, sufficient to meet the Queensland Government requirements for **Recreational** Scuba Diver assessments,

For further details contact
DIVING MEDICAL CENTRE,
132 Yallambee Road,
Jindalee, Queensland 4047

THE OVER-DIVED SYNDROME

Diving Medicine and Assessment Centre
4 Dodson Avenue
Auckland 10
New Zealand
19 February, 1992

The Editor

Having now identified two air emboli sustained in scuba diving training pools during rapid ascent from 3.6 m (12 ft)¹ and 4.5 m (15 ft)² respectively, I wonder how frequently such significant incidents occur and how many go undetected, yet have permanent sequelae?

In the group of severe diving accident cases³ that I have followed up, and in sports diving instructors, I have noted a high incidence of medical, neurological and intellectual changes. The intellectual changes have been documented in the reported cases, by Dr Dorothy Gromwell's Post-Concussion Clinic at the Auckland Hospital. No such intellectual function assessment has occurred on the sport diving instructors, although, like myself, this much dived group have soft neurological changes with almost universal hearing difficulties and tinnitus.

It is my contention, for which I invite informed discussion, that scuba diving incidents such as rapid ascent, can cause minor changes, which subsequently compound, affecting neural and other tissues, leaving many middle-aged, over-dived sport divers and sport diving instructors, with minor permanent medical disabilities. I propose the name "The Over-Dived Syndrome".

Allan F N Sutherland

References

- 1 Robinson P and Sutherland AFN. A case of cerebral gas embolism. SPUMS J 1987; 17 (1):14-15
- 2 Sutherland AFN. Pulmonary barotrauma during pool training. SPUMS J 1992; 22 (2): 89
- 3 Sutherland AFN. Diving accident cases treated at HMZNS PHILOMEL recompression chamber in 1988. SPUMS J 1990; 20 (1): 4-5

ROYAL AUSTRALIAN NAVY SCHOOL OF UNDERWATER MEDICINE

DIVING MEDICINE COURSE
21st September to 2nd October 1992

Apply directly to
The Officer in Charge,
School of Underwater Medicine,
HMAS PENGUIN,
Balmoral, N.S.W.2091