

## DIVING DOCTOR'S DIARY

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#### A TOUCH OF DECOMPRESSION SICKNESS

Carl Edmonds

#### Case report

A 42 year old male had a history of temporal lobe epilepsy between the ages of 10-15, adequately investigated by specialist neurologists at a major teaching hospital and with multiple EEG's. He was passed fit for diving by an inexperienced diving physician. The diver also happened to have hypertension and was taking beta blockers. The physician changed the beta blockers to a calcium channel blocker, ostensibly for safety's sake.

He completed a diving course satisfactorily and on his fourth dive after the course he did his first independent open water dive.

The dive was a single level one to 24 m and he was with an equally inexperienced buddy for 22 minutes before both of them, almost simultaneously, realised that they were very low on air. He could not actually remember the amount but it was "somewhere in the coloured section and it might have been 1 something or other". They decided to ascend fairly rapidly, through a bevy of bubbles. They omitted the 5 m stop on the grounds that they would have drowned had they stayed there. A reasonable decision under the circumstances.

The swim back to the boat was strenuous, against a strong current. Fortunately he was a fairly fit man.

After the dive there was no obvious problem until the following morning when he woke with a numbness and tingling "like a freeze burn", on the fourth finger of the right hand. By the end of that day it had spread to the other fingers and the following day it had spread to all the fingers of that hand. It was quite unpleasant and over the next few days proceeded to get worse, with significant paraesthesia and pain when pressure was applied to any of the fingers.

There was a possible history of a slight discolouration of the affected fingers, but this was not definite and did not persist.

By the time I saw him on the 6th day following the dive, there was a lessening of the symptoms, but they were

also present on the left hand, on the third finger, to a minor degree. He was left handed and there was no past history of cervical spondylosis.

On examination there were no abnormalities on neurological testing.

#### Diagnosis and treatment

A decision had to be made regarding recompression therapy, even though he presented 6 days after the incident. What would you do?

I do not doubt that he deserved to get decompression sickness, but I do not believe he had it.

We decided against recompression therapy on the basis of the full history of the dive, which was not offered to any of the previous doctors who had assessed him. On specific interrogation, he readily admitted to the probable cause of the incident. During the dive, which was undertaken without gloves, he clutched at a large yellow/orange sponge in order to hold himself down (because of his inexperience there were some buoyancy problems) but it broke off in his hand. He also made a feeble attempt at grabbing it with his left hand as he floated up.

Therein lies the answer.

Final diagnosis, sponge injury.

#### Discussion

I am not sure of the likely response of this disorder to hyperbaric therapy, but my bet is that the cold decompression environment and/or the vasoconstriction of high pressure oxygen would probably reduce the symptoms, temporarily. He could then have been assessed as another case of resolving acute neurological decompression illness, successfully treated!

His symptoms had totally dissipated 2 days after the consultation. He has now decided to do a course on buoyancy control and to wear gloves.

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