

ATYPICAL DECOMPRESSION SICKNESS

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A 23 year old female, otherwise very fit, was scuba diving on Sunday 11th November in 80 feet of water for 30 minutes. She was spear fishing, not very energetically, the water was warm but with poor visibility, no current, and she was diving alone. She had logged about 25 dives since her training course. Her ascent was slow and controlled, slower than the bubbles.

Some 5 to 6 hours after the dive she complained of abdominal pain which became progressively more severe, and was described as cramping and deep inside the abdomen. Some days later, she described that the pain had in fact been in circular, fairly narrow bands around the upper abdomen, but this was not the story listed at the time.

The pain lasted for the rest of that day and most of the night. The next day (Monday), she developed a right sided stiff neck, with increasing muscle spasm, as though she had slept badly. Later that day she developed a severe headache, described as a tight band rotating around her head. She put up with this for the whole of the day, but presented at a major hospital emergency department at 2300 hours.

On examination there were no positive findings except this history. Following a telephone consultation to Fremantle Hospital, the centre for management of diving cases in Western Australia, she was transferred there and seen at 0100 hours on Tuesday morning.

There were no abnormal neurological or other findings, except that the patient had a stiff neck and some headache. Because of the long delay before any symptoms came on, the relatively short dive, the non-specificity of the symptoms, and the fact that they were improving, it was decided to observe the patient overnight. Later that morning, Tuesday 13th November, in working hours, she still felt unwell and still had a stiff neck and headache. There was now no abdominal pain. It was decided that this could be decompression sickness and she was transferred for a trial of recompression at HMAS Stirling.

She was recompressed on a Table RN62, and her pain and discomfort were halved by arrival at depth, and by ten minutes there was little pain. She was totally normal after two hours. She was treated with an extended Table RN62, intravenous Hartmann's solution totalling 5 litres, and the Royal Australian Navy routine of Dexamethasone, 16mgms IV stat, then 8mgms eight hourly. She complained of a very unpleasant whole body sensation of pruritus "from the inside" immediately following each injection of intravenous Dexamethasone. On completion of recompression, she was given 100% oxygen for alternate hours overnight.

On Wednesday 14th November she was returned to Fremantle Hospital at 1800 hours, complaining of some chest discomfort and tightness, almost certainly due to the high oxygen dosage. Her IV therapy was continued until late evening, then discontinued, and the final dose of

Dexamethasone was given. By the next morning she was fully fit and was discharged with a certificate for work, and advised to give up diving as she appeared to have a sensitivity to, even by average standards, a small nitrogen load.

To our surprise, the patient returned the same evening with a recurrence of the pain in the right side of the neck, and the headache. She was recompressed that night at 2200 hours on RN Table 61, and the symptoms resolved slowly during that recompression.

The next day (Friday 16th November) she had a minor recurrence of symptoms and was recompressed, again on RN Table 61, when the symptoms cleared.

She was discharged home on Saturday 17th November 1984, with no further symptoms.

Thursday 22nd November, the patient presented with a recurrence of pain across both shoulders, which she described as similar to the previous pain. She was recompressed at 1700 hours on RN Table 62, with initial good, but not complete, resolution of discomfort. However, on decompression to the surface, her pain recurred in the back and shoulders.

On Friday 23rd November, now 12 days after the original incident, she was recompressed to 5 metres of sea water on 100% oxygen for two hours, with complete resolution of the pain. There has, to date, been no recurrence.

COMMENT

This case was unusual for several reasons. The symptoms occurred following a relative small exposure which was within the tables (80 feet of water for 30 minutes). It was not a particularly energetic dive, and one that she had done a number of occasions before. The symptoms did not come on for 5 to 6 hours, and were not very typical. With hindsight, any symptoms following a dive, and occurring up to 24 hours, are decompression sickness until proved otherwise.

However, her symptoms were so non-specific, and could have been associated with intercurrent viral illness which was prevalent at the time, and were getting better. When this was added to presentation at 0100 hours, the decision to await recompression until the morning seemed reasonable at the time.

It is well known that if the management of decompression sickness is not commenced until a considerable time after the onset of the problem, treatment is more difficult and recurrence more likely. This patient did not present until almost two days after the dive. Her recurrences stretched unusually long and though her symptoms were very non-specific, they did respond to recompression.

Perhaps this case again illustrates the fact that anything, after a dive is decompression illness until proved otherwise, and you may never be able to prove otherwise! Symptoms that respond to recompression, almost by definition, confirm the diagnosis.