

Diving case reports

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Case report 1

- 2 divers (male and female), multi-day diving
- 2 dives on the day that problem arose
 - 45 metres
 - 50 minutes surface interval
 - 44 metres
- Dry suits
- Use of nitrox by female diver on first dive
- NO rapid ascent

Case 1

- Female diver noticed itching on the boat after second dive
- Rash noted by male dive buddy and diving operator
- Started on oxygen on the boat and called hyperbaric physician
- Assessed by hyperbaric physician in the Emergency Room

Case 1

- Marked skin changes compatible with skin decompressions sickness
- Examination of male dive buddy revealed definite skin rash of decompression sickness
 - Diver had not noticed any itch or other symptoms
- Dive computer examined in detail (had a graphic display and was both nitrox and trimix capable)

Case 1

- Divers had NOT violated their computers
- Divers had performed stops
 - 15 minute stop on first dive
 - 3-5 minute stop on second dive
- Dive was not a multi-level type profile
- When compared to DCIEM Canadian tables and the US Navy tables
 - Omitted decompression using tables

Case 1

- The divers had signs of decompression illness and considerable omitted decompression
- Decision to treat both divers in hyperbaric chamber
- Multi-place chamber not operational
- Treated using USN Table 6 in monoplace chambers
 - No extensions (Table 6 in monoplace chamber)

Case 1

- Female diver complained of arm discomfort, “tingling” and altered sensation during the first hyperbaric treatment
 - This was a vague report at first and possibly resolved by the end of treatment
- Female diver seemed to be recovered after treatment
 - Rash and itch resolved in both divers
- Second hyperbaric treatment at 45 fsw for both divers

Case 1

- Skin changes resolved completely after second treatment
- Arm symptoms worsened in female diver after second hyperbaric treatment
- Third treatment was table 5 (60 fsw)
 - Symptoms improved but not resolved
- Further treatments of female diver led to improvement and resolution of arm symptoms

Case 1

- Divers permitted to return by air to the UK just under 1 week after resolution
- No return of symptoms on flight home

Case 2

- 32 year old male experienced commercial diver
- Storage depth 110 metres, excursion to 127 metres
- Developed pain behind his knee during decompression from his first offshore saturation dive

Case 2

- Recompressed by diving supervisor and given three periods of breathing treatment mix
- Uneventful decompression to surface
- Assessed by diving physician after decompression and cleared to fly home and to return to diving for next shift offshore

Case 2

- Developed gastroenteritis during second saturation dive offshore
- Severe retching led to development of large abdominal hernia related to incision from previous surgery
- Photos of hernia taken through porthole emailed to hyperbaric physician
- Decision to permit decompression with diver medic in attendance

Case 2

- Diver assessed after uneventful decompression
- Discovered he had previous chemotherapy with bleomycin 10 years earlier
- Referred for further investigation
 - Cardiologist for trans-esophageal echocardiography
 - Respiriologist to assess lungs due to bleomycin treatment
 - Surgeon for treatment of hernia

Case 2

- Hernia found to be at much greater risk of strangulation than had been thought when decision was made to decompress
 - Laparoscopic repair
- Cardiologist found PFO
 - Did this contribute to the decompression illness?
 - This was corrected using an “umbrella” (no open surgery)
- Initial concerns about lung function but detailed testing with CT scans and exercise pulmonary function testing and oxygen saturation demonstrated no significant problem

Case 2

- Cleared to return to saturation diving

Case 3

- Diving in Truk Lagoon
- Details not fully known
- Obese diver with thousands of dives experience
- Rebreather
- 3 dives / day
 - 200 – 250 fsw
 - 150 fsw
 - 100 fsw

Case 3

- Some sort of problem at depth on second dive of the day
- Surfaced, alert, conscious
- Skin rash noted on dive boat
- Dive buddy was hyperbaric physician and anesthesiologist
- Started on oxygen
- Some shortness of breath, possibly chest discomfort

Case 3

- Improved, remained on oxygen
- Woke up early about 3 am, short of breath
- Live a board dive vessel headed to chamber facility
- Treated on USN Table 6
- Oxygen supplies limited, not able to make extensions
- Improved in chamber

Case 3

- After surfacing chamber diver felt unwell after the treatment
- Collapsed
- Diver (who was a physician) stated that he was “going to die”
- Diver had a cardiac arrest and could not be resuscitated
- Autopsy not yet done