



Royal Netherlands Navy



Case Report

Arterial Gas Embolism during controlled ascent training in a Navy Diver trainee

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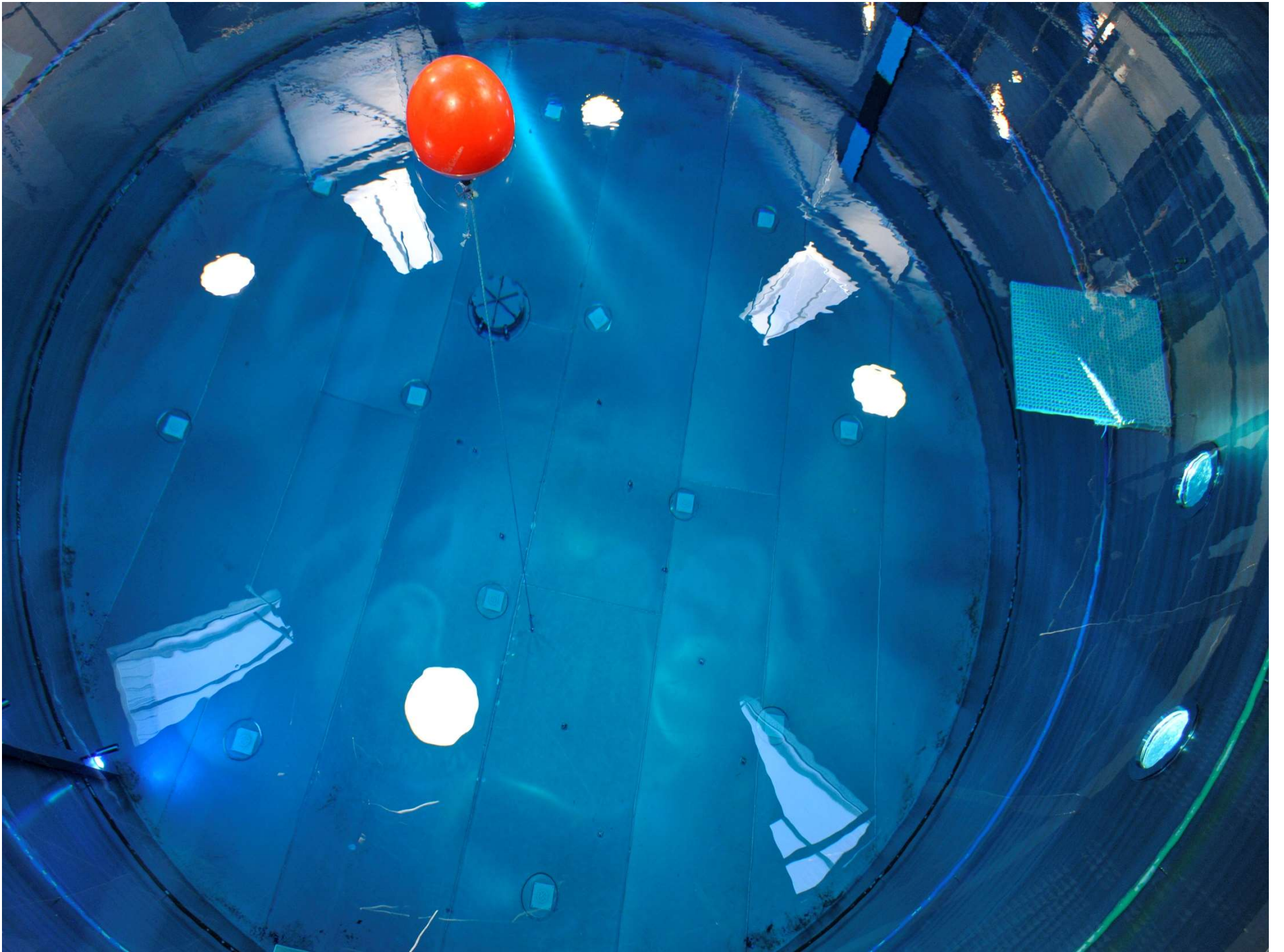
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Military Diving in the Royal Netherlands Navy

- Basic dive training is a 6 week program
 - 3 weeks pool training
 - 3 weeks open water training
- All candidates are fit to dive (EDTC standards)
 - Assessment includes PFT, exercise tolerance testing and chest X-ray







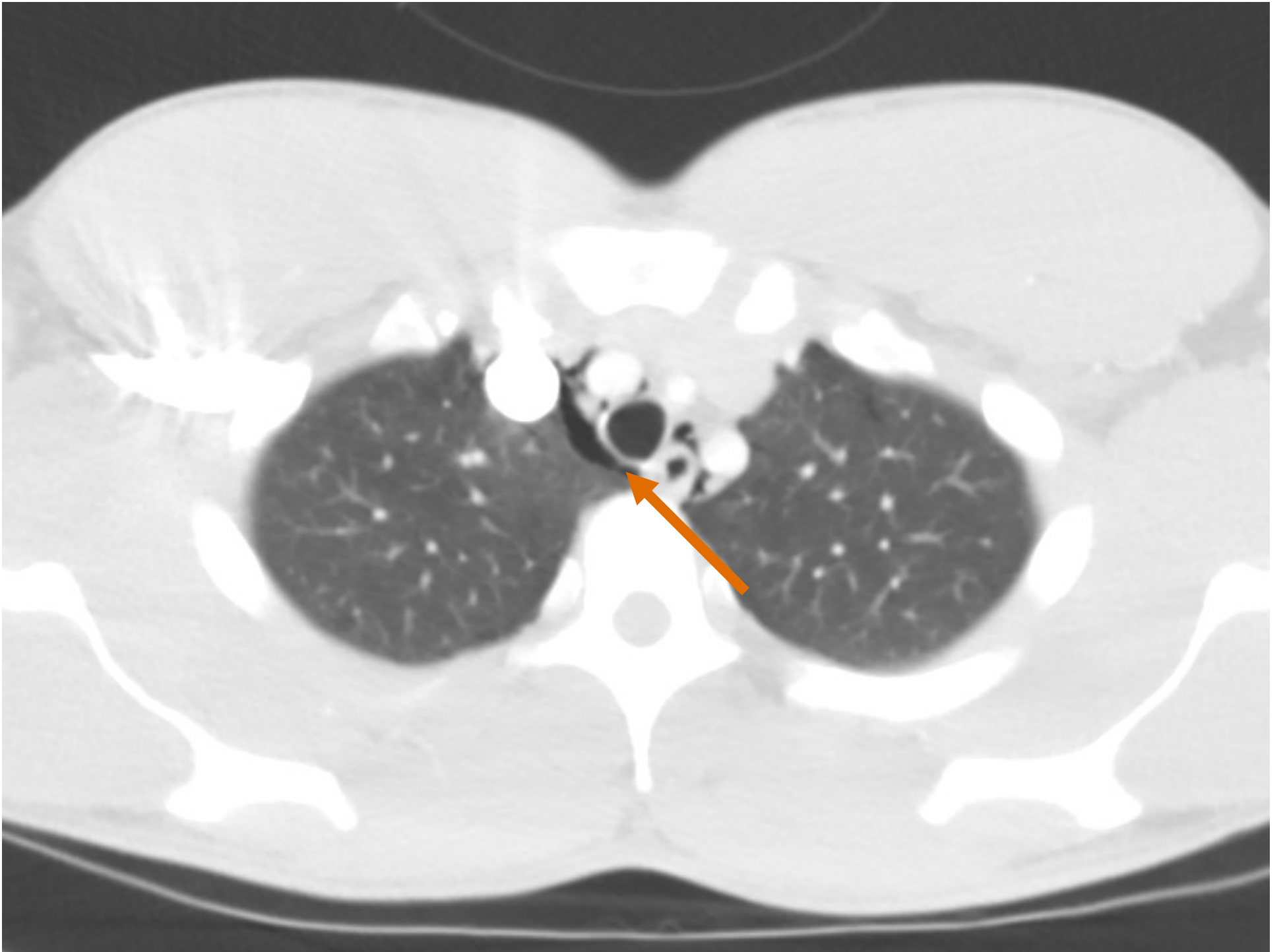
After surfacing

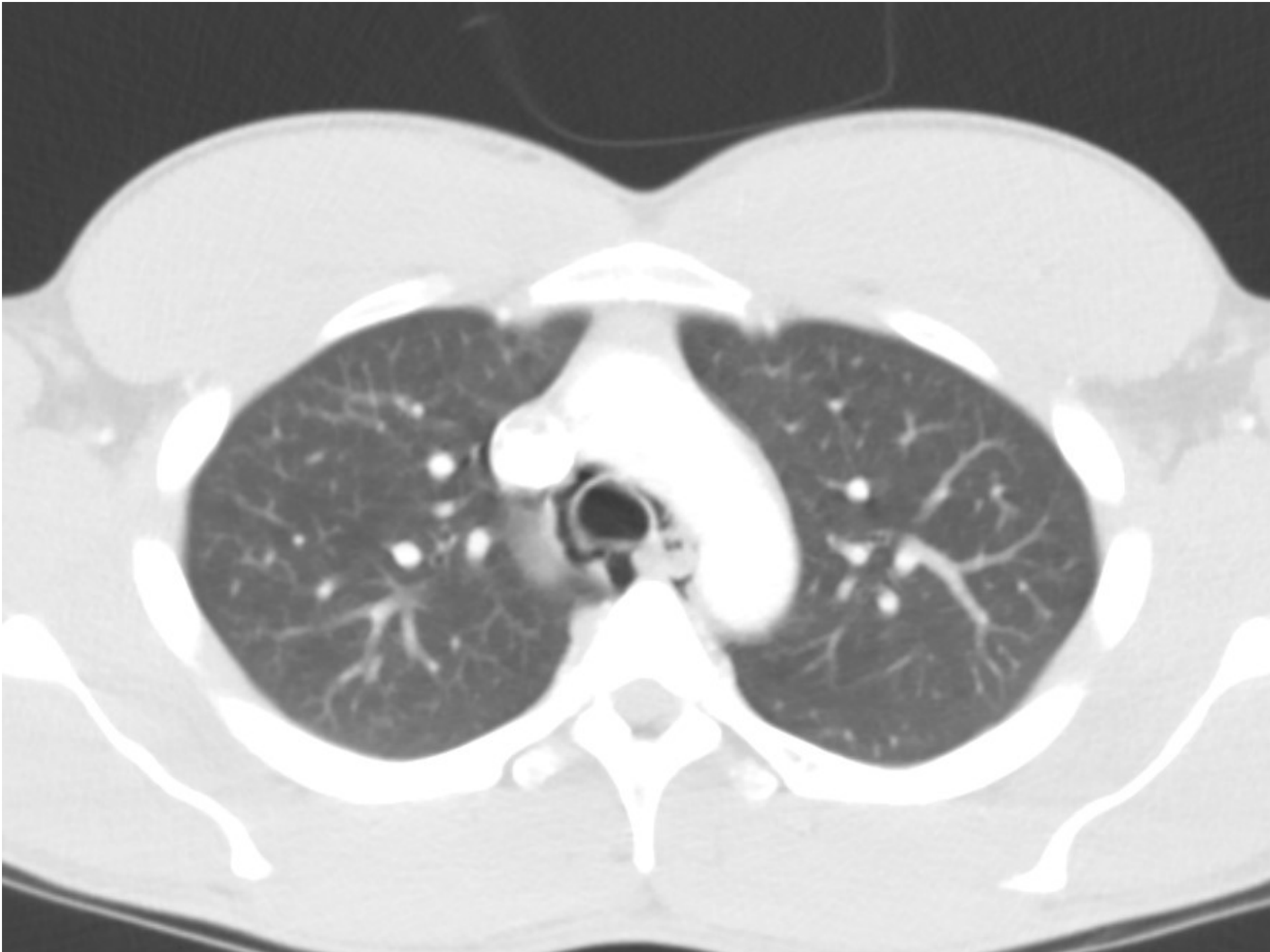
- Loss of motor skills of:
 - Right leg; left leg; right arm; eyesight.
- Recognized as an AGE
 - 100% normobaric oxygen was administered
 - *Recovery of motor skills and eyesight*



Thirty minutes after ascent

- Assessment at ER in nearest hospital. Patient was ABC-stable, with only muscle weakness of the right leg.
- No clinical signs of pneumothorax. However, a CT-scan of the thorax was made to exclude subclinical lesions.









Two hours after ascent

- Transportation to Royal Netherlands Navy Diving Medical Center. Still administering 100% oxygen.
- No objective muscle weakness, patient reported his leg felt: “like I’ve just been running for 20 km”.
- Started with treatment table 6.



Follow-up

- No complaints during or after treatment.
- Restriction of exercise for 2 weeks. Continued sports afterwards. Was deemed unfit to dive until further notice.
- Assessed by pulmonary specialist after 3 months: full recovery. Was declared fit to dive.



Summarized

A healthy, dive medically fit, marine **held his breath** during free ascent training from 9 to 5 MSW. This caused pulmonary barotrauma and **arterial gas embolism**, which led to hemiplegia and loss of eyesight.

Administration of **100% oxygen** led to quick recovery, although subtle complaints remained. Complete resolution after a **treatment table 6**.