



NAVAL OPERATIONAL MEDICINE INSTITUTE

# Decompression Sickness Type 2 in a US Navy Altitude Chamber Inside Tender

LT Reid KE, Witucki P\*, US Navy Surface Warfare Medicine Institute, San Diego CA. \* University of California San Diego Medical Center, San Diego CA.

**INTRODUCTION:** Decompression sickness is a known complication of high altitude exposure. We report here an interesting case of altitude DCS Type 2 in an altitude chamber inside tender.

**CASE:** The patient, a 39 year old male with no significant past medical history, was working as an inside tender at a US Navy altitude chamber. After pre-breathing 100% oxygen at one ATA for 20 minutes, the chamber was decompressed at 5000' per minute to 25,000' for 8 minutes, then returned to one ATA in a stepwise manner, for a total chamber time of 40 minutes, all of which was spent breathing 100% oxygen. Two hours after returning to one ATA, the tender developed nausea, vertigo, left biceps pain and bilateral finger paresthesias. He was placed on 100% oxygen and all symptoms resolved within 15 minutes. Ten minutes after oxygen was discontinued symptoms recurred. He was then transferred to the Navy's on-call hyperbaric chamber facility.

**CONCLUSIONS:** Altitude DCS is not unique. We find this case to be of interest for the following reasons:

1. The patient is an experienced tender and all safety protocols were followed.
2. The patient pre-breathed, and was on 100% oxygen through the entire exercise.
3. Repeat treatments on US Navy TT6 were required to completely resolve his symptoms.

**TREATMENT COURSE:** DCS Type 2 was diagnosed and the patient was treated using USN TT6 and received the maximum two extensions at 60', at the end of which he had full resolution of his symptoms. During ascent to 30' all initial presenting symptoms recurred along with new bilateral paresthesias in his thumbs. He was then re-compressed to 60' for a repeat TT6. Within 11 minutes of re-compression at 60' the patient reported complete resolution of all symptoms and remained symptom free for the rest of the treatment.

