



# LABORATORY FINDINGS OF A DECOMPRESSION SICKNESS CASE

**Irini Leimoni (1), Marilena Stamouli (2), Sofia Kougioumtzidou (2), Antonia Mourtzikou (3), Anastasios Skliris (4)**

1. Country Quality Manager & Data Protection Officer, Affidea, Greece
2. Department of Biochemistry, Naval and Veterans Hospital, Athens, Greece
3. Department of Diagnostic Cytology, Attikon University Hospital, Athens, Greece
4. Department of Pathology, Naval and Veterans Hospital, Athens, Greece

## PURPOSE / OBJECTIVES

Decompression sickness (DCS), also known as the divers' disease, is a condition arising from dissolved gases coming out of solution into bubbles inside the body, during depressurisation. The aim of this study is to present the laboratory results of a DCS case.

## MATERIALS & METHODS

Male, of Greek origin, aged 36, was admitted to our Emergency Department with shortness of breath, chest pain, vertigo and nausea, following an uneventful four-hour scuba dive at 30 meters. Haematological, biochemical and haemostasis tests were performed immediately. Moreover, these tests were repeated every day for a 10 days

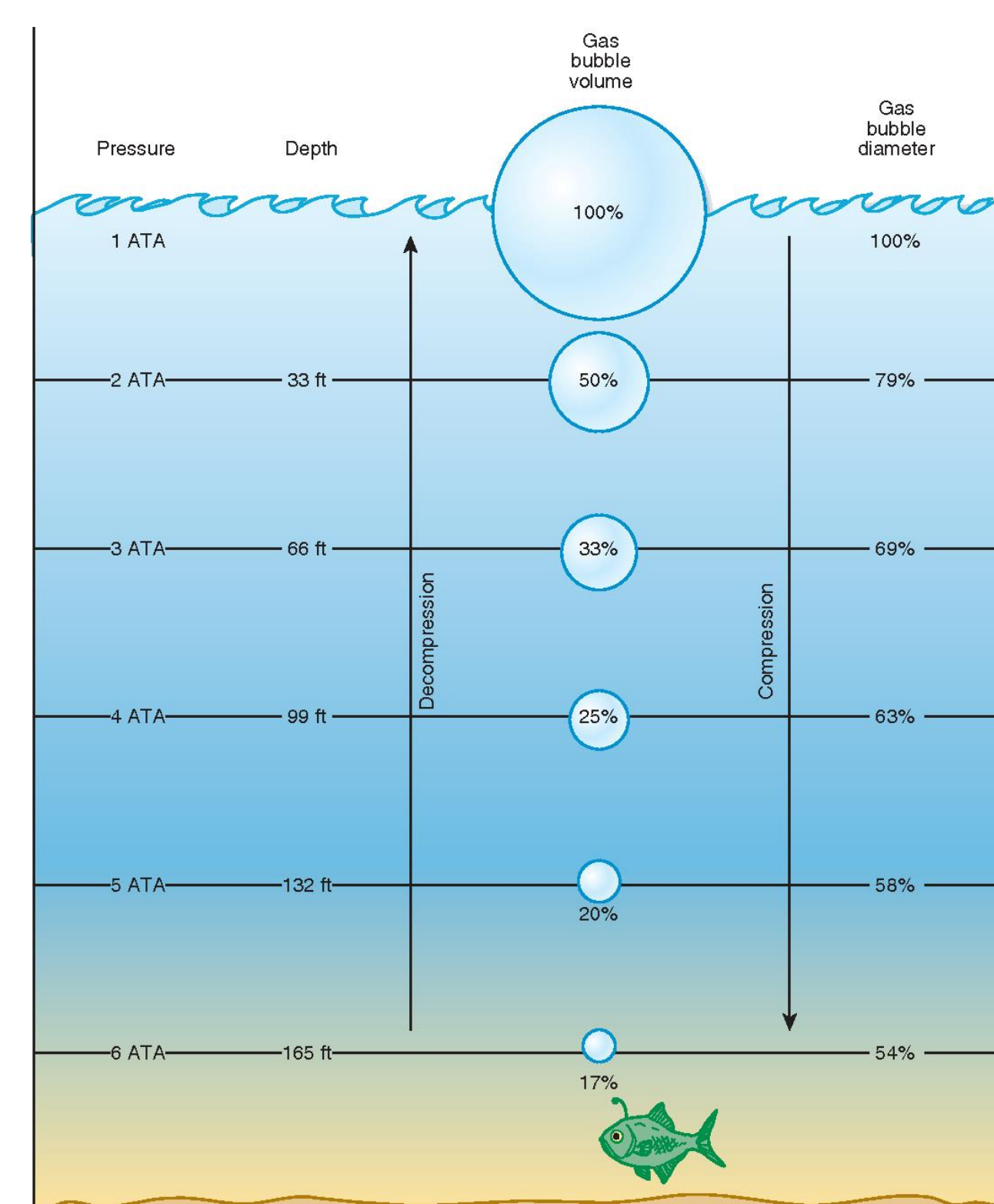


Fig. 133.1 Boyle's law. ATA Atmospheres absolute

## RESULTS

A complete blood count revealed WBC of 15.3 cells/ $\mu$ L, hemoglobin of 17.2 g/dL, and hematocrit of 49%. The basic metabolic panel was normal. The hepatic function panel showed mild elevations in AST and ALT at 130.9 U/L and 102.7 U/L respectively. Significant elevations in LDH, CPK and CRP at 3562.0 U/L, 1725.1 U/L and 389.9 mg/L respectively, were observed. Serum myoglobin level was at 411.0 ng/mL and his urine color was dark red. Serum sodium and potassium levels were 140.5 and 4.53 mmol/L. Coagulation tests (PT, aPTT, INR and Fibrinogen) were within normal limits. D-Dimer levels were at 31.6 mg/L. Arterial blood gas demonstrated pH 7.42, pCO<sub>2</sub> 35.7 mmHg, pO<sub>2</sub> 65.1 mmHg, and bicarbonate 22.5 mmol/L.

## SUMMARY/CONCLUSION

In a confirmed case of DCS some laboratory abnormalities were observed, related to mild elevations in AST and ALT and significant increase of the LDH, CPK and CRP concentration. In addition, high levels of D-Dimer and serum myoglobin concentration were detected. Finally, the urine colour was dark red.

TEST	RESULT	UNITS
WBC	15.3	cells/ $\mu$ L
HB	17.2	g/dL
HCT	49.0	%
ALT	130.9	U/L
AST	102.7	U/L
LDH	3562.0	U/L
CPK	1725.1	U/L
CRP	289.9	mg/L
K	4.5	mmol/L
Na	140.5	mmol/L
Myoglobin	411.0	ng/mL
D-DIMER	31.6	mg/L
pH	7.42	
pCO <sub>2</sub>	35.7	mmHg
pO <sub>2</sub>	65.1	mmHg
bicarbonate	22.5	mmol/L