

Lambada Dancing on a Tightrope

The relationship between SPUMS and the recreational diving industry is under considerable threat and strain. It will take both good luck and good management to avoid a return to the hostilities of 10 years ago. Indeed, some of SPUMS' most prestigious members believe that the SPUMS Executive Committee has already capitulated to the instructor organisations, and in particular to PADI.

This view of a capitulation may seem extreme, but is not difficult to see how and why it has arisen. Firstly, SPUMS has given the recreational divers access to our Journal and some of their published views have not been complimentary about diving physicians. Secondly, one of "them", Drew Richardson (PADI Vice-President in charge of training), has been admitted to full SPUMS membership. This has even upset some of the other training agencies. However, it must be pointed out that only PADI has ever bothered to "turn-up" at our annual scientific meetings. Thirdly, all of the recreational diving groups involved in the creation of the Australian Standard for recreational diving voted against any form of requisite medical examination of candidates for scuba diving instruction! The need for such examinations is seen as essential by SPUMS; and, justifiably so from our published surveys on the inadequacy of fitness assessments performed by physicians who have not been trained in diving medicine and on the poor selectivity of medical history questionnaires as a sole screen prior to diving instruction. The support these groups received for their subsequent vote against the need for trained physicians from the Australian Medical Association was both disappointing in the extreme and a clear demonstration of why so many medical practitioners do not belong to this "out of touch" organisation. Things are no better in New Zealand. Although they do insist on pre-diving "medicals", the New Zealand Underwater Association was not prepared to even encourage scuba diving candidates to be examined in this context by a physician with appropriate training, a remarkable and sad stance from an organisation that had previously shown the way with the funding of both courses for medical practitioners in diving medicine and the New Zealand Divers Emergency Service (DES). The fourth reason that suggests a capitulation has been the failure of SPUMS to encourage and develop widespread funding support from recreational divers for the Australian DES. Since the collapse of the Victorian Division of the National Safety Council of Australia, the funding of the DES has been precarious. The Federal Australian Government has been a part-funder, but has just announced that it is withdrawing all support next as DES does not conform to their definition of a worthwhile group (perhaps a just reward for trying to establish a volunteer self-help system rather than screaming for full Government funding in the first place). While NAUI, PADI and NASDS (formerly FAUI) have provided some funding, this has been interrupted on occasions such as when PADI withdrew funding from DES in the belief that the latter was

marketing DCIEM decompression schedules in competition to the PADI RDP and wheel. As a tangential issue, to illustrate why diving physicians do become cynical about recreational diving instructor bodies, NASDS is now marketing DCIEM schedules in Australia in direct competition to the Royal Adelaide Hospital. The hospital believed (perhaps naively) that it had an exclusive contract for such Australian distribution and donated all of its profits from these sales to diving medicine research. When NASDS and the hospital could not agree on terms, research funds are precious, NASDS simply entered into a separate agreement with the Canadian supplier. Even if this agreement is subsequently found to be legally reasonable, it will inevitably cause conflict between diving physicians and recreational divers. On behalf of all those who rely on such sources of diving medicine research funding, SPUMS would like to thank NASDS for their short-sightedness. To be fair to NAUI, PADI and NASDS however, it must be pointed out that organisations such as SSI and BS-AC did not even bother replying to requests from the DES for funding. The only other consistent funders of the DES have been SPUMS and the Royal Adelaide Hospital in Australia, and the New Zealand Underwater Association and the Royal New Zealand Navy in New Zealand. The recent rise in our annual subscriptions was contributed to, in part, by the assumption that SPUMS could continue to support DES without a subscription rise in 1991.

Given this behaviour, why should SPUMS bother? Why should SPUMS try to encourage dialogue and to reduce the paranoid conviction widely held in the recreational diving industry that SPUMS is trying to "take over"?

There are two primary reasons. Firstly, with the possible exception of club-based organisations such as BS-AC, the orientation of instructor bodies is, by necessity for survival, commercial. In contrast, SPUMS has no such commercial orientation and remains an "unpolluted" guardian of safety. Simply, SPUMS has an important role in maintaining standards of diver safety and health. Secondly, this role can only be exercised through dialogue. This year, PADI alone will certify more than 600,000 new divers world-wide. It follows that Drew Richardson, as Director of Training for PADI, has more direct influence on diver education and hence safety than SPUMS, DES, the Divers Alert Network (DAN), the Undersea and Hyperbaric Medical Society (UHMS) and the European Undersea Biomedical Society (EUBS) all combined.

The Executive Committee has never wavered from the purposes of the Society which are printed on each inside front cover of our Journal. From these arise the absolute requirement to promote safe diving practices. In some instances, safe diving requires a lot of supervised training; this takes time and to some degree conflicts with the eco-

conomic imperatives of running a competitive recreational diving enterprise. It is inevitable then that at times SPUMS will disagree with the practices of these training organisations. This is appropriate and should not consistently lead to sustained conflict.

Contrary to some current claims from both sides of the debate, Drew Richardson is not the first non-medico to become a full member of SPUMS. From its foundation, SPUMS has had non-medical full members. John Pennefather, the foundation Treasurer, Glen Egstrom and Peter Bennett are good examples. The requirement was and is a commitment to diving medical research.

Given the prevalent paranoia, cynicism and hostility (as manifested during recent code of practice discussions in Queensland), SPUMS' attempts at maintaining a balanced

position and of sustaining communications is very much like lambada dancing on a tightrope. The Executive Committee believes that all our members and associates must have access to our Journal, regardless of the polarity of their opinions. However, on some issues, regardless of the debate, there will be no compromise by the Society on such matters as the obligate need for all scuba diving training candidates to have a medical fitness assessment performed by a trained physician. Finally, we will welcome active participation in our annual scientific meeting (1993 - Palau, 1994 - Rabaul) by all of our members and associates. The alternative is an inevitable regression to open warfare, and consequent little benefit to anyone involved.

Des Gorman
President of SPUMS

ORIGINAL PAPERS

CARBON MONOXIDE POISONING: A REVIEW

Paul Mark

Introduction

Carbon monoxide (CO) is a colourless, odourless, tasteless and non-irritant gas. It is the commonest agent used in suicide by poisoning in the United States¹, Britain^{2,3} and Australia.⁴ In addition eighty percent of immediate deaths in burning buildings are due to CO.^{5,6}

Following non-fatal poisoning, 10-40% of victims develop neurological or psychiatric sequelae.⁷ The risk of death or major disability is increased in the young, the elderly and those with cardiovascular, cerebrovascular, or pulmonary disease.⁸

Hyperbaric oxygen (HBO) was first used to treat CO poisoning by Smith in 1960.⁷ Numerous published series have established its benefit when compared with historical controls.⁸⁻¹⁵ CO poisoning is regarded as an "accepted" indication for Hyperbaric Oxygen Therapy by the Undersea and Hyperbaric Medical Society.¹⁶

A recent review of thirteen published series containing 3,441 CO poisoned patients has shown clearly that administration of hyperbaric oxygen at 2-3 atmospheres absolute (ATA) soon after admission to hospital and repeated daily, or as made necessary by the patient's condition, is the only effective treatment of CO poisoning yet demonstrated.¹⁷

This paper reviews recent advances in our knowledge of the pathophysiology of CO poisoning and describes its clinical presentation. It outlines the management of the CO poisoned patient in the emergency department and discusses the indications for referral to a hyperbaric facility.

Circumstances of poisoning

The clinical features of CO intoxication are non-specific and may outlast the detection of carboxy-haemoglobin (COHb) in the blood. A thorough history often suggests the diagnosis in less obvious cases.

ATTEMPTED SUICIDE

Patients attempting suicide usually park their vehicles in isolated places with a hose connecting the exhaust pipe to the interior of the vehicle. Occasionally they park in a closed garage with the vehicle windows open. Even if the motor stops, the exhaust fumes persist for hours. The Australian change to unleaded petrol for new vehicles should reduce the opportunity for suicide as catalytic convertors significantly reduce the output of CO.¹⁸⁻²⁰

FIRE

Persons trapped in building fires usually collapse from CO poisoning before being burnt. The mortality from CO poisoning is four times higher when it is complicated by smoke induced chemical pneumonitis.²¹ The delayed sequelae of smoke inhalation greatly increase the mortality from cutaneous burns.²² This may be partly due to the concomitant production of cyanide which is difficult to detect specifically.^{5,23} A number of other irritant chemicals such as