

cant [2.04mmol/l; (36.7 mg/dl); p<0.0001]. Insulin-requiring diabetics had a significantly greater drop in BGL than non-insulin-requiring diabetics [2.61mmol/l; (46.98 mg/dl)] vs. 1.5mmol/l; (27mg/dl); p<0.03].

They concluded that diabetics will drop BGL by ~2mmol/l (36mg/dl) during treatment. They recommend BGL measurement prior to HBO and pretreatment of insulin-requiring diabetic patients with BGL <8mmol/l (144mg/dl) and of non-insulin-requiring diabetics with BGL of <6mmol/l (108 mg/dl). These recommendations correlate with published expert opinion and clinical experiences.

Conclusions: Following the above recommendations, practitioners can safely and effectively reduce the risk of symptomatic hypoglycemic events in diabetics treated with HBO. Specifically, we recommend measuring BGL prior to HBO in all diabetics and pretreating those with BGL ≤ 140 mg/dl. Further, large, prospective, multicenter randomized, controlled trials are needed to explicitly define parameters for such treatment.

E8

AN EVALUATION OF ALCOHOL-BASED PRODUCTS IN MONOPLACE HYPERBARIC CHAMBER FACILITIES: INTRODUCTION TO SAFER ALTERNATIVES

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Background: The flashpoint of a chemical is the lowest temperature at which enough fluid can evaporate to form a combustible concentration of gas. Isopropyl alcohol is a widely recognized disinfecting agent with a flashpoint of 70 degrees Fahrenheit in a normobaric setting. Its use requires special precautions to maintain compliance with NFPA 99 Chapter 20.3.1.5.2.3 - "Flammable liquids, gases, or vapors shall not be permitted inside any Class B chamber."

Chamber manufacturers advise against applying solvents containing alcohol to chamber acrylic. The crazing damage it will cause can lead to cracks in the acrylic.

The CDC reports on a healthcare worker who applied an alcohol-based hand sanitizer. She did not allow adequate time for evaporation of the alcohol. The friction created between her paper gown and a patient's linen produced a static spark triggering spontaneous combustion. Her hands suffered second- and third-degree burns.

Materials and methods: Approved disinfectants for chambers and related equipment are recommended by manufacturers. NFPA 99 20.3.6.4.1 requires implementation of a formal housekeeping education program to prevent such personnel from applying unapproved cleaning agents on or around the acrylic. This program emphasizes the use of products that protect acrylic and reduce the risk of fire. Hand washing with soap and water is proven safe and effective for removal of visible contaminants.

Results: Several new products containing benzalkonium chloride (BZK), a non-flammable, alcohol-free, antibacterial sanitizer offer a safer alternative for use between patient interactions in the hyperbaric setting, and will be further discussed.

Conclusions: Reducing fire hazards while ensuring effective infection control are equally important safety measures within the hyperbaric oxygen environment. Eliminating alcohol-containing cleansing products is a key safety aspect.

E9

AUTOMATIC BUBBLE COUNTING AND THE IDENTIFICATION OF LEFT ATRIUM AREA IN ULTRASOUND IMAGES FOR OBJECTIVE ASSESSMENT OF PATENCY IN CARDIAC FORAMEN OVALE

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Background: Patent foramen ovale (PFO) can be identified as a malocclusion of the septal wall that separates two atria. Recent studies on migraine, cerebral ischemia and paradoxical embolism propose