



# CAISSON

29. Jg. September 2014 Nr. 3

Begründet von Oskar F. Ehm - Mitteilungen der GTÜM e.V.

BOOK OF ABSTRACTS inside

**EUBS** European Underwater and Baromedical Society

40<sup>th</sup> Annual Scientific Meeting of the European Underwater and Baromedical Society (EUBS)

**GTÜM-Kongress 2014**  
Wiesbaden, Germany  
24. – 27. September 2014



Organisation:



Supporting Organisation:



Sponsor PLATIN:



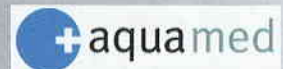
Sponsor GOLD:



[www.hauxlifesupport.de](http://www.hauxlifesupport.de)



Sponsor SILBER:



Sponsor BRONZE:



three clusters and the percentages of symptoms in each cluster are listed. The symptoms were clustered using Ward's Method according to their occurrence patterns in DCI cases to analyse the similarity between the patient group characteristics and sign and symptom clusters.

**Results:** Both for two and three patient clusters, the first cluster is formed by pain in or around a joint only. For three clusters, the second cluster consists of predominantly vestibular symptoms and the third cluster is formed by neurological symptoms. The grouping of signs and symptoms is consistent with distribution of the dominant signs and symptoms into patient clusters.

**Discussion:** We conclude that cluster analysis is a suitable method for classifying DCI manifestations independent of clinical judgment.

The characteristic sign and symptoms for different groups of DCI patients provide a non-biased statistical point of view to clinically useful DCI subclasses on which there is little scientific consensus.

Although clustering techniques cannot substitute expert knowledge and experience in differential diagnosis, they provide a objective point of view to DCS classification. Project supported by Citeph (France).

#### 34 The clinical examples of successful application of HBO in the treatment of soft tissue infections

*J. Milošević, B. Markuš, T. Jovanović*  
Centre for Hyperbaric Medicine, Belgrade, Serbia

**Introduction:** Soft tissue infections are commonly caused by mixed aerobic and anaerobic bacteria. They usually occur in patients suffering from diabetes mellitus, vascular insufficiency, immunocompromised and traumatic patients or after surgical procedures.

Since anaerobic infections are life threatening, the timely introduction of HBO treatment as the therapy of choice, along side surgical and antibiotic therapy is important in order to reduce the morbidity and mortality.

The aim of this study was to show the effects of HBO in the treatment of soft tissue infections.

**Method:** In december of 2013, 7 patients with severe soft tissue infections, were admitted in the center for hyperbaric medicine, belgrade. The infections were of different etiology – diabetes mellitus, complication after hernioplasty, complication after injection of narcotics, flegmona of perianal region.

The infections were located in the different body areas. HBO treatment was introduced, alongside existing pharmacotherapy and daily wound care. Treatment protocol included 100% oxygen at 2.8 ATA, 90 min, 5 exposures every 8 h, followed by 2.5 ATA, 70 min daily, 15-30 exposures totally.

**Results:** After completion of hbo therapy, the infection was eliminated in all the patients. In 3 patients the wound completely closed, and in 4 other together with the infection elimination the wound was greatly reduced, but they needed additional treatment for next 2 months.

**Conclusion:** Serious nature of soft tissue infections demands early introduction of HBO, together with aggressive treatment protocols, without delay. Considering the complexity it is necessary to have a multidisciplinary approach to treatment. Clinical example from our practice show the importance of HBO in the treatment of soft tissue infections regardless of location or etiology.

**Keywords:** Soft tissue infection, Diabetes mellitus, HBO

#### 35 A 24 year experience of a university hyperbaric medicine center

*M. Cimsit, B. Oroglu, A. Cakkalkurt, S. Aktas, AS Toklu*  
Department of Underwater and Hyperbaric Medicine of Istanbul Medical Faculty.

**The center:** Underwater and Hyperbaric medicine was first started as a part of Medical Ecology and Hydroclimatology in Istanbul Medical Faculty in 1984. Five years later it became a separate department and was recognized as a specialty where residents are trained for three years. Initially, patients were treated in a small multiplace chamber that served for eight years. In 2001, the clinic was moved to its own building but worked with only two monoplace chambers until 2008, in which a new multiplace chamber was installed. The center now serves in a separate four-floor building with in-patient (21 beds) and out-patient departments, a multiplace chamber and a physiotherapy unit.

**Organization:** Currently, apart from the academic staff, ten residents, six nurses, one chamber operator and one physiotherapist are working as the medical staff at the center. Patients who either apply themselves or are referred by other departments are first evaluated by residents and specialists. For the ones that hyperbaric oxygen therapy is indicated, a lung x-ray is always seen before treatment. Treatment protocols are in line with ECHM and UHMS recommendations. HBO is usually applied at 2.4 ATA and the duration is two hours. All sessions, including emergency calls, are attended by a resident or a nurse in the chamber. This way, patients are closely monitored for any sign of complication during session.

**Experience:** Since 1990 to the end of 2013, 2473 patients were treated in our chambers and the total number of treatments was 63136. For all the years the leading indication was diabetic foot, with 591 patients and 20731 sessions. No severe blood loss anemia and brain abscess were treated and anoxic encephalopathy was the rarest condition in 24 years. Decompression sickness cases make only the 4.97 % of our patients and only 1.5 % of our sessions. Carbonmonoxide intoxicities tended to decrease in time where as sudden hearing loss increased and idiopathic aseptic necrosis treatments almost exploded in the last five years. The most common side effect was middle ear barotrauma as expected with a total of 32 cases and not a single oxygen toxicity or lung barotrauma were seen. The barotraumias incidence was almost same for monoplace and multiplace chambers.