



**International Commission for Mountain
Emergency Medicine (ICAR MEDCOM)
FALL MEETING 2017
SOLDEU ANDORRA
OCTOBER 19-21, 2017**

Alison Sheets and Ken Zafren

The tiny country of Andorra was the gracious host to the 2017 ICAR conference attendees. The ski town of Soldeu provided modern conference facilities with just enough of the old Pyrennese town remaining as an elegant backdrop. The local bombadiers organized an excellent conference and demonstrated their technical skills from the local ski lifts and construction cranes! The following MEDCOM report is not comprehensive but covers the presentations and discussions most relevant to the MRA membership. Further details of the MEDCOM activities are available in the formal minutes which can be found on the MRA website.

President Fidel Elsensohn (pictured above) welcomed the members of the Commission and guests. There were 69 members in attendance, the largest number of participants in an ICAR MEDCOM meeting yet.

PRESIDENT'S REPORT

Fidel announced the deaths of 4 Commission members and long-time rescuers. Alfred Thomas of Germany and Marcel Escoda of Andorra died in 2003. Jose Ramon Morandeira of Spain died in 2012. Bruno Durrer of Switzerland died in 2016. Hermann Brugger gave a short tribute to Bruno Durrer.

Change of leadership and honors

After 8 years as President of the International Commission for Mountain Emergency Medicine Fidel Elsensohn will pass the baton to John Ellerton of the UK. He concluded, "THANK YOU ICAR MEDCOM FRIENDS. Thanks to all members of the Executive Board of ICAR for their support and to all members and delegates of ICAR." Fidel was honored with lifetime ICAR membership later in the conference, as was our own Ken Zafren for his many years of service and considerable contributions.

ICAR BUSINESS

Membership categories and voting privileges were discussed in the Assembly of Delegates. New categories (A, B, C, D) were proposed that will concentrate the voting power to organizations where members perform mountain rescue yet allow a global and diverse ICAR membership. This was accepted by the Assembly and will go into effect in 2018. MRA remains a type A member.

Mountain Safety Knowledge Base (MSKB): Working group led by Manuel Genswein. A Memorandum of Understanding was adopted in August at a meeting of all the stakeholders (ICAR, UIAA and others). The goals as discussed here and in the reports from the other ICAR Commissions, include establishing best practices in mountain safety. These are not intended to be formal recommendations or policies (to address liability concerns). Rather, they will respect member organizations and cultural practices. Although commercial, the MSKB will be a not-for-profit organization with a yearly subscription model as the method for financing ongoing work. Working groups and writers will be limited to organizations with a global presence, such as ICAR, UIAA and IFMG.

PROPOSED PAPERS AND PROJECTS IN DEVELOPMENT

Multiple trauma management in alpine environments.

Peter Paal

This proposed paper builds on the 2009 paper regarding fluid management in mountain rescue. It will be a systematic review with PICO questions scored by the American Heart Association

(AHA) evidence-based scoring system. The intention is to address all aspects of trauma evaluation and treatment in the mountain rescue setting. The publication will be Open Access. The first author will be Günther Sumann and the senior author will be Peter Paal. The other initial authors will be: Mike Greene, Bruce Brink, Giacomo Strapazzon, Monika Brodmann, Didier Moens, Mathieu Pasquier, Poul Kongstad, Alison Sheets, Daryl Macias, Ken Zafren, Kazuo Oshiro and possibly authors from Nepal and South Africa.

ICAR MEDCOM recommendations on suspension syndrome.

Hermann Brugger

The pathophysiological mechanism of suspension syndrome has been debated for decades. Partial results of a new Italian study at the EURAC Institute of Mountain Emergency Medicine (IMEM) in collaboration with the Medical University of Innsbruck were presented by Giacomo Strapazzon.

Methods: The subjects were suspended either after resting or after climbing on a climbing wall. The subjects were instructed to stay as still as possible. Multiple physiologic measurements were made.

Results: There were 20 subjects. Presyncope occurred in 30% of subjects.

There were marked increases in venous pooling and decreases in heart rate in the subjects with presyncope but not in subjects without presyncope. Results were similar with regard to blood pressure.

Conclusion: The most likely cause of presyncope in suspended subjects is neurally mediated (vagus nerve).

Recommendations; Syncope may be avoided by active movement. Victims of suspension syndrome should be rescued as rapidly as possible and placed in the supine position. There is no evidence in favor of a semi-recumbent position.

A discussion followed. There is still the misconception that patients with suspension injury should not be allowed to lie flat. Strapazzon, Beverly and other researchers have found no evidence to support this and in fact, strongly recommend supine position for patients as soon as possible. Also, based on case reports, suspension victims should be treated as emergent. In one recent case report from Europe the victim had been hanging from a paraglider harness after getting caught in ski lift cables for 45 minutes and was uninjured. The patient went silent for rescuers after likely syncope. The patient was rescued shortly afterwards, was found in cardiac arrest and did not survive.

ICAR MedCom recommendations will be developed for suspension syndrome based on these limited studies. The recommendations should be ready for review in Fall 2018.

Psychosocial health of ski patrollers and mountain rescuers.

Marie Nordgren

Ulrika Tranaeus and Marie Nordgren from Sweden have begun a qualitative project interviewing ski patrollers and mountain rescuers. The mean age is 37.5 years. Swedish, Italian and UK studies found that volunteer rescuers coped better than professional rescuers, possibly due to a sense that they were performing a worthwhile service. They will continue research to

identify risks of developing PTSD and prevention strategies. A working group reporting in the 2018 Spring and Fall meetings with a view to publishing a paper was proposed.

Medical Resource Website

Natalie Hölzl

Natalie outlined the formation of a working group to develop a knowledge base for ICAR MEDCOM that was approved by consensus at the 2017 Spring meeting. The knowledge base will be an internet-based library. The site should be user-friendly for the contributors as well as for those accessing the knowledge base. Although similar in intent to the MSKB, this website will be specifically medical topics and carry on the already extensive work of the ICAR MEDCOM already available in multiple publications and on the ICAR website.

SHORT PRESENTATIONS

Knowledge of avalanche checklist.

Giacomo Strapazon

Reference: Strapazon G, Miglaccio D, Fontana D. Knowledge of the Avalanche Victim Resuscitation Checklist and Utility of a Standardized Lecture in Italy. Wilderness Environ Med 2017 [epub ahead of print].

A retrospective study in Italy had shown low adherence to avalanche guidelines. This study was a pre- and post-lecture survey during 8 mountain rescue courses in Italy. Prior to the course 36% of the participants knew the correct burial time cutoff for withholding CPR in a completely buried victim with an obstructed airway. This increased to 84% after the course.

Survey of Management of Severe Hypothermia by Mountain Rescue Teams.

Andreij Gorka

Reference: Podsiadio P, Darocha T, Kosinki S, et al. Severe hypothermia management in mountain rescue: a survey study. High Alt Med Biol 2017 [epub ahead of print].

Aim: To assess whether mountain rescue teams (MRTs) are able to follow guidelines.

Methods: A questionnaire was sent to 123 MRTs in 27 countries.

Results: There was a low rate of return of questionnaires and a low incidence of severe hypothermia. Many teams were not equipped with electrocardiographic (ECG) monitoring, automated external defibrillators (AEDs) or low-reading thermometers.

Some patients were sent to local hospitals rather than to hospitals capable of extracorporeal rewarming (ECLS).

The majority of MRTs are not equipped to provide Advanced Life Support (ALS) especially in victims who are in cardiac arrest.

Optimizing avalanche rescue strategies using a Monte Carlo simulation approach.

Peter Paal and Manuel Genswein

This is a paper outlining a statistical simulation to determine best chance of survival for multiple victims of avalanche burial. Genswein has argued that performing 20-30 minutes of CPR (as in most existing protocols) on an avalanche victim in cardiac arrest significantly reduces the

chances of survival for other buried victims in the same accident. He argues that CPR should be attempted for 5-7 minutes only and if there is no return of spontaneous circulation, attempts to find other victims should take priority. This is for circumstances when there are more patients than rescuers. Expect to hear more on this topic in future resuscitation guidelines.

Causes of death in avalanche fatalities in Colorado: a twenty-year review

Alison Sheets

The study determined the proportion of avalanche deaths due to trauma in Colorado from 1995-2015 . The results showed that 29% of fatalities were from trauma, higher than in any previous study. Multisystem trauma and head trauma caused over half of trauma deaths. Most European data had much lower rates of trauma. The difference may be more related to research techniques than to the actual avalanche trauma fatality rates in Europe.

FORTHCOMING ICAR EVENTS

2018

April 25-28: ICAR MedCom Spring meeting; Tromsø, Norway.

Lead: Julia Fieler (juliafieler@gmail.com); main topic – hypothermia.

October 17-20: ICAR General Assembly; Chamonix, France

Note the extended format – conference starts on Wednesday. „Pre-conference“ workshop will be on Friday. **It is the 70th anniversary of ICAR**

November 21-24: ISMM World Congress of Mountain Medicine; Kathmandu, Nepal.

ICAR will take the lead in establishing the Mountain Emergency Medicine programme.

2019

Spring (dates TBD): ICAR Medcom meeting; Bolzano, Italy

Proposed to be at the new TerraXcube environmental simulation chamber.

October 9 – 13: ICAR General Assembly; Zakopane, Poland

(Classic format with pre-conference day on Wednesday)