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Summary of the CMC Scientific Program 2018

Lieutenant Colonel Dr Jochen Lührs, Military Medical Center Ulm

or the third time, the CMC Conference organizers had prepared an exciting and interesting scientific program. During 2 days and eight sessions, 34 lectures were held on current topics. The international participants were able to follow the presentations with simultaneous interpretation in English and German. In addition to speakers from Europe (France, Germany, England, Ireland, Belgium, Norway, Switzerland), there were experts from all over the world (Canada, Nigeria, South Africa, United States).

After the welcoming speeches, Staff Sergeant James C. Lee, member of the United States Army Special Operations Group, started with his own emotional case report on tactical medicine. Speaking without any notes or visual presentation, he told about a mission in Afghanistan when his unit became involved in a severe firefight and he was critically injured by grenades. In his authentic report, he described the injuries he sustained through the direct blast radius of a detonating grenade, which included shrapnel wounds over the entire body, a severe lung injury, and a severe injury to the right arm. The initial medical care was provided by the team medic and fellow soldiers while still under fire. On account of the persisting battle, it took 48 minutes to evacuate him by helicopter. During this time, Lee was stabilized and received life-supporting measures. When he arrived at the hospital, he lost consciousness due to blood loss and a tension pneumothorax and went into cardiac arrest for 63 seconds despite the intensive care provided to him. After immediate thoracotomy and open cardiac resuscitation, his cardiopulmonary activity returned and then he could receive surgical care.

Only through the professional tactical and medical assistance of his fellow soldiers and after dozens of surgeries did Staff Sergeant Lee recover. By now, he had been on operations abroad again. Through his personal experience, he was able to emphasize impressively the significance of adequate medical first aid in tactical situations within the golden hour. He concluded his speech by thanking the participants for their discipline, commitment, and willingness to train on a constant level in order to make the right decisions during operations and to assist severely injured persons like him in accordance with the CMC motto "Who Cares Wins."

The keynote speaker, independent security advisor Uwe Kranz from Germany, opened the eyes of the participants to the actual enormity of the current threat posed by terrorist organizations. He informed about the historical development of the individual terror cells, called the masterminds by their names, and provided terrifying statistics. According to him, the threat to civilians has never been greater.

His presentation was followed fittingly by the first session on the topic: "Recent Terror Attacks—How Can We Improve." The organizers had invited speakers who talked about their experiences made in the wake of the recent terrorist attacks in London and Brussels. A common international concept is the division of the site of the attack in three danger zones in accordance with the TCCC phases. The idea is that within the area under fire, only police forces will be present and transport any casualties to the medical personnel in the tactical field care zone. An essential aspect of this concept is the required police training and equipment enabling officers to provide initial medical care (most of all measures such as bleeding control).

The subsequent session on "Recent Military Missions-Lessons Learned" informed about current military missions with a focus on Africa. The mission in Mali is considered the deadliest UN mission in history. In this mission, too, civilian-military cooperation plays an important role. To demonstrate an example of this cooperation, the South African company Starlite presented their AirMedEvac concept. Major (MC) Stephan Kühn presented the Bundeswehr evacuation concept in Mali with the Forward Air MedEvac NH90. The emotional and medical highlight of this session was the presentation by Prof Sam Attar from the United States. He had been to Syria various times as a civilian surgeon and provided surgical treatment during the civil war (e.g., in Aleppo) under the most difficult conditions. He presented the surgical approach to combat-related injuries by giving vivid examples. Not only the constant bombings but particularly the many tragedies of the civilian population witnessed by him underlined his commitment. The participants paid tribute to him with standing ovations. The experienced surgeon Vart Vanderheyden from Belgium informed about the care provided to more than 200 patients at a casualty collection point in Mossul, Iraq. The participants had the opportunity to take a look beyond Europe with the presentation given by Colonel B.O. Aderoba on the Nigerian rescue system applied in the fight against Boko Haram.

Another priority of this CMC conference was CBRN. A special session held not only as part of the scientific program emphasized the importance of this topic. A variety of problems such as the identification of contaminations and decontamination were elaborated. The Syrian conflict and, most recently, targeted attacks on civilians in Great Britain showed that categories B and C agents were actually used. Modern detection techniques as well as first-aid measures were presented. This topic will certainly become even more important in the future.

Major Elizabeth Hoettels and Major Suzanne See of the United States Air Force Austere Surgical Team informed about All articles published in the Journal of Special Operations Medicine are protected by United States copyright law and may not be reproduced, distributed, transmitted, displayed, or otherwise published without the prior written permission of Breakaway Media, LLC. Contact publisher@breakawaymedia.org.

Industrial training aspects that are actually applied on results achieved in the field of trauma-induced coagulopathy

training and training aspects that are actually applied on operations.

Concluding the first day, Dr A. Bohn talked about his duty as chief emergency physician during the most recent attack in Münster where a man drove a van into a group of people. The police, the fire brigade, and the rescue service are thus required to develop new tactics and proceedings not only because of terrorist attacks but also because of incidents caused by individual citizens. Many cities and regions, Münster being one of them, have reviewed their concepts on account of the experiences made in recent years. With the skills in tactical medicine, the Münster incident was handled very professionally. But there was also a critical and self-aware discussion on the aspects that were not so beneficial, especially the repeated relocation of the improvised treatment stations.

On the second day, the scientific developments made in the treatment of special injuries and diseases resulting from terrorist attacks or other conflicts were the central topics. Research results achieved in the field of trauma-induced coagulopathy and projects and developments made in modern plastic and reconstructive surgery were presented to the highly interested participants.

The last presentation dealt with the very important topic "Training and Education," and representatives from France and Germany presented their concepts. Virtual reality medical simulators such as 3D-SC1, SanTrain, and Epicsave, which are called serious games, have become very advanced programs. Insights gained in tactical medicine are made available to a large group of people. With the help of 3D glasses, the user is able to train in realistic scenarios. The Terror and Disaster Surgical Care training course with an interactive simulation game is also an important preparation for hospitals confronted with mass casualty situations caused by terroristic attacks.

With the fourth CMC Conference on 1–2 July 2020 under the motto "Now More Than Ever," the organizers are setting high standards for themselves.

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JOURNAL of SPECIAL OPERATIONS MEDICINETM

Winter 2018 Volume 18, Edition 4

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