

**WORLD NURSING FORUM**  
&  
13<sup>th</sup> International Conference on  
**RHEUMATOLOGY & TRAUMA CARE**

September 02-03, 2019 | Vienna, Austria

## **Traumatic cardiac arrest in European trauma course**

**Florian Trummer**

Hospital of the Brothers of St. John of God Vienna, Austria

The cardiac arrest of a patient with multiple injuries after an accident, the rescue teams usually faced an unsolvable task. Due to declining numbers of polytraumatized patients, it is not possible to learn the necessary routine for the treatment of cardiac arrest in multiple injuries in everyday working life. Therefore, TCA training is playing an increasingly important role in the standardized courses for primary care and trauma management of the polytraumatized.

After an algorithm for resuscitation in Traumatic cardiac arrest (TCA) was included in the European Resuscitation Council guidelines for Resuscitation 2015 and was cited in S3 – Guidelines in treatment of multiple-trauma patients of German Society for Trauma Surgery in 2016, the "TCA in the European Trauma Course" was also decided as a pilot project to start.

Therefore, the working group of the ETC Austria decided that the implementation of the TCA Scenario should take place on the second day of the course. The reason for this is that on the first day, the focus is on non-technical skills and structuring. To carry out such a complex scenario on day 1 might lead to massive problems for the participants, but also for the instructors by leading it to the teaching key points. But it was decided to emphasize on day 1 in the Thorax Workshop the role of bilateral thorax decompression measures like needle thoracocentesis, pleurocentesis and chest drain insertion in TCA situations according to the actual recommendations.

### **Materials**

#### **Preparation of material**

Bilateral mini thorotomy, according to Guidelines, has to be performed at every TCA if pneumothorax cannot be excluded without any doubt. However, evidence-based data show that Clamshell thoracotomy is very more likely to be successful in TCA after penetrating trauma. For this reason, it was decided that an already existing scenario with penetrating trauma should be changed into a TCA scenario. Therefore the second scenario with penetrating trauma in the Abdomen Workshop already available on day 2 was used as the basis for the creation of the new TCA scenario. In this context, the interactive Power Point presentations and Role Cards for this example have been changed in advance. Furthermore, Power Point slides with the explanation of both TCA algorithm and Clamshell thoracotomy were added. The duration of this scenario was planned with 30 minutes including feedback.

### **Methods**

A total of 20 instructors and 65 participants in three courses, conducted a survey, which consisted of questions about the need to implement TCA scenarios in the European Trauma Course.

### **Results**

- There were total 79 doctors and 6 nurses
  - Participants: < 1-year work experience (n=4), 1 – 5 years work experience (n=25), 6 – 10 years' work experience (n=15), 11 – 15 years' work experience (n=5), > 15 years work experience (n=16).
  - Instructors: 1 course experience (n=1), 1-5 courses experience (n=6), 6 – 10 courses experience (n=5), 11 – 15 courses experience (n=1), > 15 courses experience (n=7).
- For 100% of the instructors and 96% of the participants, it's very important to implement TCA scenarios to standardized courses like ETC.

**WORLD NURSING FORUM**  
&  
13<sup>th</sup> International Conference on  
**RHEUMATOLOGY & TRAUMA CARE**

September 02-03, 2019 | Vienna, Austria

- 91% of the instructors and 89% of the participants prefer theoretical and practical education of TCA. The others prefer only a theoretical lesson.
- For 87.5% of the instructors it's positive to perform TCA scenario with 6 participants/group
- 92% of the participants and 95% of the instructors are very happy with the duration of 35 minutes for TCA scenario

**Conclusion**

It turns out that the implementation of the TCA in the ETC seems to be absolutely necessary and feasible. The preparation for this scenario should be done very accurately on Instructor's Day and should be led at least during the initial phase only by very experienced ETC instructors. The time for this example must not be less than 30 minutes. The debriefing needs to reiterate the importance of bilateral thoracotomy and the potential indication for following clamshell thoracotomy

**Biography**

Florian Trummer has his expertise in anesthesiology nursing and major trauma management. He has experience in research, evaluation, teaching and administration both in hospital and education institutions. The society of European Trauma Course Austria is based on education for medical personal, who is involved in treatment of major trauma patients.

florian.trummer@etca.at