

EndoVascular resuscitation and Trauma Management (EVTM) Workshop



29-30 November 2018, Örebro, Sweden

Endovascular and hybrid solutions for the bleeding patient; incl. Aortic balloon occlusion (ABO) / Resuscitative endovascular balloon occlusion of the aorta (REBOA), Vascular Access, Embolization, Endografts, and much more.

Local EVTM instructors

Thomas Larzon MD, PhD; Asko Toivola MD; Artai Pirouzram MD; Tal Hörer MD, PhD
Rickard Lindgren MD PhD; Per Skoog MD, PhD; Kristofer Nilsson MD, PhD;
Dept. of Cardiothoracic and Vascular Surgery, Dept. of General Surgery,
Dept. of Anesthesia and Intensive Care, Örebro University Hospital, Sweden

Guest EVTM instructors: Daniel Eefting (Vascular, NL), Joe Love (Trauma, US),
Simone Fajer (Vascular, IL), Federico Coccolini (Trauma, IT), Vassil Manchev (Trauma, ZA),
Lauri Handolin (Trauma, FIN), Tongporn W. (Trauma, TL),

In cooperation with: Japanese society of Diagnostic and Interventional Radiology in Emergency,
Critical care and Trauma (DIRECT): Yousuke Matsamura (IR, JP), Junichi Masumoto (IR, JP)

Local assisting group: Maria Wikström, David McGreevy, Carolina Nilsson, Monica Clomen,
Nina Adolfsson, Jonas Berlin, Johan Josefsson

Dept. of Cardiothoracic and Vascular Surgery, Dr. Tal Hörer
2018-11-26

TARGET: Surgeons, IR, ED, Vascular and Intensivists with interest in trauma/bleeding/resuscitation, Emergency/pre-hospital teams, Military trauma teams.

DATE: 29-30 November 2018.

VENUE: Clinical Training Center (V-entrance, V-building) and Animal Lab, Örebro University Hospital (USÖ). SE-70185 Örebro, Sweden.

COST (cover expenses only): 500 Euro. 400 Euro for EVTSM Society members.

DIRECTOR: Dr. Tal Hörer MD, PhD. Associate Professor of Surgery.

REGISTRATION / SECRETARY: Åsa Strandberg, asa.strandberg@regionorebrolan.se

PARTNERS: Tokai Medical Products, REBOA Medical, GORE, BK Medical, Boston Scientific, Canon Medical Systems, Mentice, MicroVention, Secma, STILLE, Ziehm Imaging, Örebro University Hospital.

OBJECTIVE: The aim of this workshop is to stimulate discussion and practice EndoVascular resuscitation and Trauma Management (EVTSM) using a multidisciplinary team approach. “No ego, just good science and cooperation” is the main motion of the workshop. We will explore different methods for trauma management, bleeding control and resuscitation, some established and some methods never practiced before.

- Vascular access:
 - Methods (blind, Doppler, ultrasound, fluoroscopy, cut down)
 - Its use in hemodynamic unstable patients
- Aortic Balloon Occlusion (ABO) / Resuscitative endovascular balloon occlusion of the aorta (REBOA) basic and advanced methods
- Basic and advanced endograft and embolization methods
- Damage control EVTSM and ‘Bailout’ methods
- Basic and advanced postoperative considerations
- Up-to-date research and clinical experience
- ABOTrauma Registry cases and participant cases
- Knowledge of basic materials
- Intensive training on both dry models as well as live tissue
- Basics for building a “REBOA / EVTSM service”
- Advanced methods in resuscitation and possible use for ECMO and eCPR

The workshop is designed for experienced physicians, but is individually tailored during the practical parts. Participants will get basic training and knowledge of REBOA placement as part of the EVTSM concept. The workshop has been certificated by the EUCME and acknowledged by the European Society for Trauma and Emergency Surgery (ESTES) and in cooperation with other significant societies.

Day 1, 29th November: Clinical Training Center

- EVTm algorithm and up-to-date world experience
- Theory and methods for vascular access; basic and advanced
- Practical physiology of REBOA/P-REBOA/I-REBOA and literature
- Use of access, aortic/arterial balloon occlusion, endografts, embolization and other tools for the bleeding and unstable patient
- Dry model training and Mentice[©] simulator training
- Group discussion about ABOTrauma Registry cases and participant cases
- Building an EVTm service and initiating REBOA use

11:45 Gathering: 2nd Floor, Clinical Training Center (KTC), V-entrance, V-building.

12:00-12:30 Lunch, Welcome and Introduction – Tal Hörer.

12:40-16:00 **10 minute presentations** and short discussions (coffee served during sessions):

EVTm, the concept – T. Hörer (Vascular)

Endovascular tools for bleeding control – S. Mathisen (Vascular)

Vascular access basic principles and tips – S. Fajer (Vascular)

Vascular access advanced principles and tips – P. Skoog, A. Pirouzram (Vascular)

Complications of access/REBOA incl. MOF/ACS, my view – L. Handolin (Trauma)

What patients would benefit from REBOA, my view – J. Love (Trauma)

Trauma surgeon view on Endovascular resuscitation, REBOA – V. Manchev (Trauma)

Pelvic bleeding – How to think and what to do? – F. Coccolini (Trauma)

Cases of interest and first experience in Thailand – Tongporn W. (Trauma)

Evaluation of organ perfusion during PREBOA – Y. Matsamura, J. Masumoto (IR)

Current results ABOTrauma registry (211 patients) – D. McGreevy (Vascular)

Cases of interest – T. Hörer, A. Pirouzram (Vascular)

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16:00-18:00 Discussions/exchange of experience/information, and **hands-on training stations**:

- Aorta 3D models
- C-arm usage; Angiography table
- Endo-simulator
- Access and REBOA stations
- Practical training and discussion with instructors in groups; individual level
- Material for endo-trauma and hybrid management
- The “EVTM REBOA trolley”
- Over the wire methods (Seldinger) on dry model
- Blind and ultrasound guided access
- Introducers and upgrading; endo-shunts

19:00 Departure to dinner (Wobbler Lounge. OBS! We will walk together from the venue).

Day 2, 30th November: Clinical Training Center, Animal Lab

07:00 Gathering: 2nd Floor, Clinical Training Center (KTC), V-entrance, V-building: changing clothes to scrubs.

07:15-08:40 “EVTM anatomical review - what can we do?” REBOA practice. (Cadaver)
(OBS! Preliminary – to be announced 29th November)

08:40-09:15 Breakfast with the industry incl. clinical cases in the Clinical Training Center.

09:20-14:30 Hands-on training in the Animal Lab. One-on-one training on live tissue, as well as group scenario discussions. Every station is led by a highly experienced instructor. Lunch and coffee will be served.

Practical training in the Animal Lab:

- Material usage in bleeding patients, general considerations. The trauma-bay kit.
- Vascular access:
 - Basic principles
 - Cut-down techniques
 - Endoshunts (and shunts)
 - Hybrid procedures
 - Puncture methods
 - Seldinger technique
 - The failing access - alternatives
 - Venous access
- Upgrading/introducers/guide wires
- REBOA
 - Equipment / REBOA kit
 - Steps/REBOA placement
 - Deflation and re-positioning
 - P-REBOA/I-REBOA (partial, intermittent) with MAP as target
 - Ongoing bleeding practice
 - CPR procedures and pending arrest

As times allows and based on individual level:

- Balloon in alternate locations (Iliac, Subclavian, Brachiocephalic trunk/Zone 1 neck).
- Aortography and Angiography considerations (type, volume etc.).
- Embolization of target vessels: material, access, Coils, Onyx/Phil. Endograft deployment (basic/advanced issues). Pelvic bleeding.
- Bleeding management scenarios.
- ECMO in EVTM/eCPR

14:30-15:00 End of EVTM Workshop, incl. evaluation.

The EVTM workshop is designed for shared learning and sharing of experiences!

“No ego, just good science, and cooperation”