Padova University
Department of Medicine, Director: Prof. Angelo Gatta

Workshop on: Modern anesthesia techniques: learning by doing

Padova, Italy
• May 24-25
• June 21-22
• September 20-21
Simulation in anesthesia: an outline

SimulARTI is an advanced simulation project established by the Anesthesia and Intensive Care Clinic – Department of Medicine – University of Padova. The innovative element of high technological content offered for training and continuing medical education is based on the use of interactive simulation with the most advanced manikins available worldwide. The sophisticated tools of the Advanced Simulation Unit, among which the Human Patient Simulator HPS from METI, allow to mirror the physical and physiological reactions of a potential human patient.

SimulARTI offers to the attendants:
- the knowledge and skills of the Medical Staff of Department of Pharmacology and Anesthesiology and the Institute of Anesthesia and Intensive Care;
- the most advanced simulation system currently available;
- a patented method for the management of information technology and multimedia developed to optimize the learning experience.

Objectives:
- By means of the advanced simulation, train and bring healthcare providers up to date:
  - providing the most advanced theoretical knowledge in the fields of anesthesia and critical care medicine
  - allowing the translation of the theoretical knowledge into clinical practice with the use of the simulator;
  - testing “hands on” the knowledge obtained.
- Demonstrate the most effective techniques and decision making in all the different critical situations, thanks to the possibility to operate in the “protected environment” of simulation.
- Suggest and show in practice the most appropriate behaviour in order to reduce clinical risk practical.
- Provide “on demand” video recording of each simulation session.

List of Faculty members
- Carlo Ori, MD
- Fabio Baratto, MD
- Michele Carron, MD
- Massimo Micaglio, MD
- Matteo Parotto, MD
- Paolo Persona, MD
Aim of the course

The pharmaceutical class of halogenated anaesthetics includes halotane and enflurane, which have been largely replaced by the more recently developed iso-flurane, sevo-flurane and des-flurane, less soluble in tissues and with a better cardiovascular tolerance.

Sevo-flurane and des-flurane are characterized by a more rapid kinetic. The clinical advantages of such a profile are faster induction and awakening and better control. All the halogenated anaesthetics, regardless of their individual cost, are cheaper choices (especially if used with a closed circuit or a low fresh gas flow input) when compared to intravenous agents also if we consider the comparably fast, or even faster, awakening.

Anyway, the combination of inhalational and intravenous agents in a balanced anaesthesia technique carries important advantages in general anaesthesia management, both in terms of patient's comfort and safety and in terms of costs.

The course aims to deepen the knowledge of the principles, theoretical background but also the practical aspects of modern balanced anesthesia, with particular attention to the use of des-flurane and sevo-flurane in combination with intravenous drugs, mainly opioids. The course will consist of a theoretical classroom session and of three practical parts (the computer-based microsimulation, the macrosimulation with advanced electronic simulators (Human Patient Simulator by METI) scale 1:1 and then directly into the operating room. This will allow interaction of the participants with the group of expert trainers and tutors belonging to different anesthesia sub-specialties (general surgery, thoracic, vascular, neurological, gynecological). The evaluation of the anesthetic techniques will also be evaluated using non-invasive hemodynamic monitoring (Picco, Vigileo, PRAM).

Objectives

At the end of each training course participants will be able to describe the procedures of administration, the dosage of drugs to be administered, depending on the clinical cases, and define the indications and contraindications for use of inhaled anesthetics.

Learning objectives

Attending the training course participants will acquire:
- knowledge of the pharmacokinetic and pharmacodynamics of inhaled anesthetics;
- knowledge of the indications and contra-indication of inhaled anesthesia and individual anesthetic agents;
- skill in the use of inhaled and balanced anesthesia in different clinical settings.

Activities

Participants group assignments (12): 2 groups (green and red) containing 6 participants each. Further division in smaller groups (subgroups) of 2 participants for macrosimulation sessions and of 3 participants for microsimulation sessions.

On the first day of the course, there will be 3 macrosimulation scenarios (in each scenario, 2 participants will be involved while 4 participants observe the scenario on a wide screen), with role changes and followed by a collective debriefing session. After the macrosimulation session, participants will be involved in microsimulation sessions with a tutor divided in 2 subgroups containing 3 participants each. On the second day of the course, participants will be involved in operating room (O.R.) practical session, followed by a collective debriefing session.
Teaching methods
As regards the theoretical part, the course will be conducted with the help of slide shows that introduce the clinical cases to engage learners.
Moreover, the practical sessions will be based on the execution by all participants of practical and technical activities on a manikin and on computer microsimulation of clinical cases, and on practical exercises in the operating room. At the end of the course a CD containing all the presentations shown during the course will be given to each participant. Within one month after the end of the course, a DVD with footage filmed during the simulations on the manikin performed by the participant, along with the feedback he received by the teacher, will be sent by mail to each participant of the course.

Target audience
The course is designed for a small group of 12 participants graduated in medicine and surgery and holding a diploma of specialization in anesthesia and intensive care, in order to facilitate the learners attendance and direct observation of clinical cases in the operating room and to gain therefore not only the theoretical knowledge, but mainly the manual, technical and practical skills.

Accreditation
Dipartimento di Medicina, Università degli Studi di Padova, Via Giustiniani, 2 – 35121 Padova (Italian CME provider no.1884) will submit following CME activity “Modern anesthesia techniques: learning by doing” (Padova, Italy – May 24-25, 2012; June 21-22, 2012; September 20-21, 2012) for accreditation by the European Accreditation Council for Continuing medical Education (EACCME). Website of the course www.simularti.it

Scientific Organizer
- Carlo Ori, MD

Scientific Secretariat
- Fabio Baratto, MD

Organizing Secretariat
Dipartimento di Medicina, Università degli studi di Padova
Via Giustiniani, 2 – 35121 Padova
Ref.: Nicoletta Mansueto
Phone +39 049 8213090/1 fax +39 049 8754256
e-mail nicoletta.mansueto@unipd.it
**Scientific Program**  

<table>
<thead>
<tr>
<th>Date</th>
<th>Session Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 24</td>
<td>Theoretical session</td>
</tr>
<tr>
<td>June 21</td>
<td>First practical session/Parallel session</td>
</tr>
<tr>
<td>September 20</td>
<td>With the direct help of the teacher, each participant simulate on a manikin (Human Patient Simulator by METI), the administration of the halogenated anesthetics and control the various parameters that can be altered, in a scenario like the one described in the title, such as respiratory rate, heart rate, etc..</td>
</tr>
<tr>
<td>September 20</td>
<td>Microsimulation scenarios: use of halogenated volatile anesthetics in various surgical specialty and with different types of patients.</td>
</tr>
<tr>
<td>May 25</td>
<td>Second practical session/Parallel session</td>
</tr>
<tr>
<td>June 22</td>
<td>Clinical practice in the operating room</td>
</tr>
<tr>
<td>September 21</td>
<td>08.30 Clinical practice in the operating room (tutors)</td>
</tr>
</tbody>
</table>

**List of speakers**

- **Baratto Fabio, MD**
- **Ori Carlo, MD**
- **Persona Paolo, MD**
- Ori Carlo, MD Professor of Anesthesiology, Department of Medicine, Padova University
- Baratto Fabio, MD Institute of Anesthesiology and Intensive Care, Padova University Hospital

**Tutors**
- Carron Michele, MD Assistant Professor in Anesthesiology, Department of Medicine, Padova University
- Parotto Matteo, MD Doctoral (PhD) School of Pharmacological Sciences, University of Padova
- Persona Paolo, MD Institute of Anesthesiology and Intensive Care, Padova University Hospital

**Workshop on "Modern anesthesia techniques: learning by doing"**
(Padova, Italy, 24.–25.05.2012)
Event code: 7321 was granted 6 European CME credits (ECMEC) by the European Accreditation Council for Continuing Medical Education (EACCME). Your event will now be posted on the EACCME homepage.

With kind regards,
The UEMS – EACCME Secretariat

**European Union of Medical Specialists**
EACCME - European Accreditation Council for Continuing Medical Education
Institution of the UEMS