

Tutorial "Anesthesiology and surgical Critical Care Medicine"

Training items catalogue

Basics of general anesthesia

- Definition of anesthesia
- Subjects of general anesthesia
- Differences between general anesthesia and regional anesthesia/blocks
- Differentiation of sedation, hypnosis and anesthesia
- Difference between analgesia and anesthesia
- Importance / meaning of inhalative anesthesia, intravenous anesthesia (incl. total intravenous anesthesia) and balanced anesthesia
- Criteria for the advantages of a combination of different anesthesia techniques
- Pharmacokinetics of total intravenous anesthesia (TIVA)
- Parameters of basic monitoring (ECG, noninvasive blood pressure, pulse oximetry, capnography, respiratory therapy)
- Sequence of action of an intravenous anesthesia induction
- Intravenous vs. inhalational anesthesia induction
- Causes and symptoms of the phases of excitation
- Clinical signs and tools for measuring the depth of anesthesia
- Reasons for blood pressure decline after anesthesia induction

Pharmacology of general anesthesia

Characteristics of substances used for general anesthesia:

- Barbiturates
- Propofol
- Etomidate
- Opiates
- Muscle relaxants (depolarising, non-depolarising)
- Inhalational anesthetics (gaseous, vaporous)

Respiration during general anesthesia

- Influence of general anesthesia on respiration
- Tools for retaining the upper airways (masks, guedel tube, endotracheal tube)
- Mask-ventilation (indications, practice, risks, contraindications)
- Endotracheal intubation
 - Advantages
 - Indications
 - Structure of the tube
 - Techniques
 - Positioning of the tube, position monitoring

- Anesthesia ventilation
 - Ventilation modes (assisted, manual, controlled)
 - Principle of pressure controlled ventilation vs. spontaneous breathing

Basics of post-operative pain therapy

- Dangers and intensity of postoperative pain
- Principles of post-operative pain therapy (application routes, balanced analgesia, pre-emptive analgesia)
- Characteristics of substances used for postoperative pain therapy:
 - Opiates
 - NSAID
 - Paracetamol
 - Metamizol
 - Local anesthetics

Intensive Care Medicine

- Blood pressure stability
 - Influencing physiological variables
 - Diagnostic tools
 - Therapeutic tools
- Respiratory Insufficiency
 - Clinical signs
 - Ethiology
 - Difference between oxygenation and ventilation, partial and global insufficiency
 - Therapeutic tools