

Summary

In the thesis we summarize the results of three studies which used newer anesthesiological monitoring systems. The main conclusions of the results were:

1. At the proper level of anesthesia, sevoflurane decreases mean arterial pressure and therewith cerebral blood flow. In the international anesthesiological literature we were the first to use derived indices for the assessment of cerebral blood flow which take changes of the systemic blood pressure into account.
2. We have shown that sevoflurane evokes direct dilation of the larges vessels of the brain. Beside this, decreased cerebral blood flow is caused by decreasing of the systemic blood pressure.
3. We proved, that in patients with ASA I-II severity grading, an experienced anesthetist is able to provide proper level of anesthesia, intraoperative awareness and dreams are not more freqeunt than with the use of a depth of anesthesia monitor.
4. We also demonstrated that if anesthetics are guided based routine clinical signs patients spend longer time periods in the zone of deeper sedation as assessed by depth of anesthesia monitors.
5. We were the first showing that there is a high incidence of hypothermia in patients transported from ICU to radiological investigations under sedation.
6. In our study we have shown that this hypothermia may be effectively prevented by active warming systems during transport.