Summary

The thesis analyzes the issue of securing the airways in special conditions. The author is a military anesthesiologist, so the special conditions in this work are understood as the situation on the battlefield. The introductory part of the thesis discusses the historical development of the view of airway management, describes the various methods of airway management and their position in "combat airway management".

The research part of the thesis first explores supraglottic airway management techniques, which in today's concept of algorithms and recommendations is intended primarily for non-medical professionals and/or health professionals who do not have much experience with complex methods of airway management. The first part has shown that the use of supraglottic devices by inexperienced rescuers is safe and that it is possible to define and choose from a large number of aids that are the most suitable on the market. The second part of the research part was focused on tracheal intubation and portable video laryngoscopes. It has shown that these can improve intubation conditions even if performed by an inexperienced rescuer.

The main research effort has been focused on the most critical part of airway management procedures, surgical airway access. A live large laboratory animal proved to be the best model for cricothyrotomy. In this model, we first performed a pilot and then a comparative study of two methods that are most often used for urgent surgical securing of the airways. It was a puncture technique, still widespread in many places, using the TracheoQuick Plus device and the surgical technique using the BACT method. The results statistically significantly documented that BACT is the preferred method of cricothyrotomy in this model.

In the final part of the work, the author, who is currently the main expert in the Czech Army in the field of emergency medicine, anesthesia and intensive care, suggests the most appropriate recommendations for securing the airways in the field.

Keywords: *cricothyrotomy, BACT, TracheoQuick Plus, airway management in the battlefield, supraglottic airway device, video laryngoscope*