

Dissertation work: Using of robotic surgery in otorhinolaryngology

The aim of this dissertation is to introduce the use of robotic surgery in otorhinolaryngology.

The theoretical part deals with the description of robotic devices and their use. This part is divided into several chapters: the invention of robots, its development and its usage in medicine. The theoretical part also deals with specifications, safety and main principles of controlling. It also includes the description of the most commonly used robotic system in medicine – the daVinci system.

Furthermore, the theoretical part explains, how robots are used in otorhinolaryngology and other surgery fields including the preparation and practical procedures in a robotic operation.

The other part describes specific indication criteria for transoral robotic surgery (TORS) including extended uses in otorhinolaryngology, especially in transaxillary thyroidectomy.

The special part contains the evaluation of resulting data from a group of otorhinolaryngology patients with T1 and T2 squamous cell carcinoma of base of tongue and supraglottis who were operated on robotically in comparison to traditional open surgery procedures.

Key words

Robot, use in medicine, da Vinci system, use in otorhinolaryngology