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РОЛЬ РОБОТОТЕХНИКИ ПРИ ПРОВЕДЕНИИ ПРОСТАТЭКТОМИИ**Научный руководитель – к.филол.н., доцент Артемова О.Е.**

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Робот-ассистированная хирургия на данный момент является одним из важнейших достижений, стоящих на переднем плане современной медицины. Во многих странах робот-ассистированные операции рассматриваются специалистами как новый стандарт оперативного лечения различных патологий. В России робот-ассистированная хирургия появилась и делала первые шаги, усилиями врачей-урологов, и по сей день урология является одной из ведущих областей применения роботизированных систем.

Ключевые слова: простатэктомия, рак предстательной железы, робот-ассистированная хирургия.

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THE ROLE OF ROBOTICS IN PROSTATECTOMY**Scientific Advisor – Ph.D. in Philology, Associate Professor Artemova O.E.**

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Robot-assisted surgery is currently one of the most important achievements at the forefront of modern medicine. In many countries, robot-assisted surgeries are considered by specialists as a new standard for the surgical treatment of various pathologies. In Russia, robot-assisted surgery appeared and took its first steps through the efforts of urologists, and to this day urology is one of the leading fields of application of robotic systems.

Key words: prostatectomy, prostate cancer, robotic surgery.

Today, robotic surgery is a revolutionary technology that opens up new opportunities for surgery and its development in the 21st century. Robo-technical systems expand the technical capabilities of surgeons and improve the quality of medical care due to high accuracy, functionality and less damage to the patient's body.

Traditional surgical methods involved large incisions, such a method allowed for full-fledged visualization of organs, as well as the ability to probe the operated site, but this method had objective disadvantages associated with large tissue traumatization. Laparoscopic surgery has become an evolutionary replacement for the classical method, in which operations on internal organs are performed through small incisions using a laparoscope. The advantages of laparoscopy over laparotomy are obvious, it is less tissue injury, less blood loss and, as a result, fewer postoperative complications and significantly faster rehabilitation.

However, laparoscopy also has disadvantages, since laparoscopic by itself limits the surgeon's actions, the surgeon's hands cannot penetrate into some hard-to-reach areas, and there is also a human factor, a person cannot have perfect accuracy and there may be hand trembling after a long operation, as well as limited visualization.

But now a days, the next evolutionary step in surgical interventions has appeared, namely robot-assisted surgery.

Robotic operations are most widely used in urology. Robotic surgeries are most often used in the treatment of prostate cancer during radical prostatectomy (RP). Currently, prostate cancer is being diagnosed in an increasingly younger contingent of people, which brings to the fore the issue of functional results of surgery. It means getting rid of cancer, preserving the patient's ability to retain urine and restoring erectile function in the postoperative period [1].

Due to its undeniable advantages, robot-assisted laparoscopic radical prostatectomy (RALRP) ensures the achievement of the highest functional results than with laparoscopic radical prostatectomy (LRP). Examples are faster postoperative recovery, shorter catheterization time, and lower pain rates according to the numerical assessment of postoperative pain (NRS) [7,8].

The use of RALRP allows for complex neuropsychopreservative operations, the results of which increase the chances of restoring erectile function in the range of 10-46% according to many authors [2,3,4,6].

The surgical anatomy of nerve-sparing RALRP was first proposed in the work of P. Walsh and P. Donker [9], who described the concept of a topoanatomic relationship between the neurovascular bundle and the prostate gland. Based on this work, a large number of different author's techniques for preserving the neurovascular bundle have appeared, the diversity of which is one of the reasons for the heterogeneity of the functional results of RP published in various articles.

When comparing three different surgical approaches (open prostatectomy, LPR, RALRP), the advantages of robot-assisted surgery are:

- 1) Reducing the intensity of postoperative pain;
- 2) Shortening the period of postoperative rehabilitation;
- 3) Reduction of intraoperative blood loss;
- 4) Reduction of instrument tremor during surgery;
- 5) Improved intraoperative visualization;
- 6) The possibility for the surgeon to continue his professional activity after certain diseases (for example, hernia of the cervical spine, various injuries);
- 7) The possibility of remote operations from central medical institutions;
- 8) The ability to create a database of video recordings for further use in training, unlike open prostatectomy.

The disadvantages of RALRP include the high cost of equipment for robotic surgery, the lack of tactile sensation, as well as the fact that robotic operations are performed by well-deserved surgeons, and therefore laparoscopic operations go to a younger generation of surgeons with less experience [5,c.90].

In conclusion, it is worth noting that the expediency of robot-assisted operations is equal to the complexity of a certain surgical intervention. Robot-assisted surgeries are a new qualitative leap

in the implementation of minimally invasive surgical interventions. With all the undeniable advantages of this method, there is a need to develop scientific and educational material on this to Fig.

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