

Treatment Of Cervical Cancer In Fertilized Women

Navruzova V.S.¹, Yuldasheva N.Sh.², Navruzova R.S.³, Nabieva U.P.⁴

^{1,3}*Tashkent Pediatric Medical Institute*

⁴*Institute of Immunology and Human Genomics, Academy of Sciences of the Republic of Uzbekistan*

Malignant neoplasms of the reproductive system of women are the most frequent in the structure of oncological diseases. Their total share is more than 38% in the structure of the overall incidence of malignant tumors. According to the WHO, 550 thousand cases of newly diagnosed cervical cancer (CC) and more than half of deaths from this pathology are registered annually in the world. In the Republic of Uzbekistan in 2012, 1323 patients with cervical cancer and 623 deaths from this disease were registered. In recent years, there has been an increase in the incidence among women of fertile age. Increasingly, the disease occurs between the ages of 28-45 years. In the Republic, about 60% of cervical cancer is detected in the I-II stage of the disease.

Traditional anticancer treatment in the initial stages allows, in the overwhelming majority of cases, to save the patient's life, but leads to irreversible loss of fertility, which greatly reduces the quality of life of young women who have not previously realized reproductive function. Physiological and psychological consequences of infertility caused by the treatment of a malignant tumor are extremely negative. In addition to the fact of unrealized reproductive function, the majority of young patients in this group have depression of varying severity, stress disorders and sexual dysfunction.

The peculiarities of morphogenesis and carcinogenesis of cervical tumors, high survival rates in early stages and an increase in the number of patients of reproductive age pose the task of oncogynecologists to improve the quality of life by preserving fertility.

Based on these circumstances, it became necessary to develop and implement organ-preserving surgery - radical abdominal trachelectomy.

Cervical cancer is characterized mainly by the local spread of the tumor process. The transition of the tumor to the upper parts of the vagina, parametric tissue and sacro-uterine ligaments is most often observed. The growth of the tumor to the upper parts of the uterus is observed less often in 13-15% of cases. In the initial stages of cervical cancer, the tumor most often affects the transformation zone (), in 28-34% of patients the tumor is localized in the lower segment of the cervical canal, in 15% in the middle and in 2% in the upper segment. The middle and lower third of the vagina is affected in the common stages of cervical cancer and is rare.

Cervical cancer metastases depend on the histological structure of the tumor. In squamous cervical cancer, ovarian metastases, according to various authors, vary from 0.2% to 2.2%, and in adenocarcinoma, 4-10%. The question of the need to remove the ovaries in case of

adenocarcinoma of the cervix in the initial stages remains controversial. the likelihood of metastasis during this period is small.

Lymphogenous metastasis in cervical cancer affects the parametric, obturator, ileal, sacro-sacral, presacral, lateral, aortic lymph nodes.

The most significant prognostic factors in cervical cancer that affect the choice of treatment tactics are tumor size, depth of invasion, infiltration of parametric tissue, metastatic lesions of regional lymph nodes, and morphological parameters of the tumor.

1. MATERIALS AND METHODS:

The aim of this work is to study the quality of life of patients with cervical cancer by using organ-preserving surgical treatment.

In the gynecological department of the Republican Cancer Research Center of the Ministry of Health of the Republic of Uzbekistan, organ-preserving operations were performed on women of fertile age with cervical cancer in the initial stages. The patients' age is from 27 to 37 years.

The patients were examined clinically and instrumentally. Carefully collected anamnesis of patients, including genital and extragenital diseases and conditions. Objective gynecological examination, which makes it possible to determine the volume of the cervical tumor, the form of growth and relationship to the walls of the vagina, the state of the parametric tissue and loco-regional lymph nodes. Biopsies were taken from the affected area, and a morphological study of the material was carried out. All patients have squamous cervical cancer. In 2 patients, squamous cell non-keratinizing cancer, in 5 patients, squamous cell keratinizing cancer. The history of the degree of tumor differentiation showed that 3 patients had highly differentiated cervical cancer, 4 patients had moderately differentiated cervical cancer.

Radical abdominal trachelectomy includes partial or complete removal of the cervix, upper third of the vagina, pelvic tissue around the cervix and vagina, vesicouterine, sacro-uterine and cardinal ligaments, common, internal and external iliac vessels.

The main difference between **RAT** (Radical abdominal trachelectomy) and **Radical extirpation of the uterus** with appendages is not only the preservation of the body of the uterus, ovaries and fallopian tubes, but also subsequently the reproductive function.

The success of the surgical intervention depends not only on knowledge of the topographic and anatomical features of the small pelvis, but also on the level of technical training of the surgeon and the choice of anesthesia.

RAT is performed under general combined anesthesia and begins with a midline laparotomy and placement of wound dilators to improve the view of the surgical field. Revision of the abdominal and pelvic organs makes it possible to analyze the condition of the abdominal and pelvic cavities. Of particular importance is the presence of adhesions after various auxiliary processes or interventions in these areas, which can be accompanied by functional or organic changes of a different nature.

A thorough revision and study of the topographic and anatomical structure of the uterus and appendages, the state of the vessels, surrounding organs and tissues, the retroperitoneal space and ureters are performed visually and palpably. If there is free fluid in the small pelvis or lateral canals, it is aspirated for urgent cytological examination.

To assess the condition of the ovaries, attention is paid to the structure, the presence of cysts or formations of a cystic-solid nature, if necessary, resected with urgent histological examination during the operation.

The state of the parietal and visceral peritoneum, the presence of deseminates or any changes are studied.

After completion of the revision in the Trendelenburg position, the intestinal loops are moved to the upper abdominal floor and isolated from the small pelvis.

The bottom of the uterus is stitched with a Z-shaped silk suture and fixed with a clamp for free movement of the uterus during the operation, if necessary. This procedure is performed to avoid trauma to the ovaries, fallopian tubes and vessels of the uterus feeding these organs.

The first stage of the operation is pelvic lymph node dissection, which makes it possible to adhere to the principles of radical surgery for cervical cancer in order to avoid loco-regional spread of the tumor process. The round ligaments are dissected alternately on both sides and access to the iliac region is opened. Lymphadenectomy of tissue is performed around the common, external and internal iliac vessels up to the obturator fossa, around the obturator nerve, the cervix and the upper third of the vagina. During lymph node dissection, special attention is paid to careful coagulation and ligation of the lymphatic vessels in order to reduce postoperative lymphorrhea. After lymphadenectomy, tamponade of the obturator zone is performed with gauze napkins moistened with 96% ethyl alcohol on both sides in stages.

After completion of lymph node dissection on both sides with the absence of these metastases in the lymph nodes, stage 2 of the operation begins. This stage includes complete or partial removal of the cervix, depending on the location and size of the primary lesion with the upper third of the vagina, peri-cervical and paravaginal tissue, cardinal, sacro-uterine and vesicouterine ligaments.

The main task at this stage of the operation is not only to preserve the body of the uterus, ovaries and fallopian tubes, but also to preserve the vessels that adequately nourish these organs.

In this regard, special attention is paid to careful and careful handling of the uterine and ovarian vessels.

After dissection of the peritoneum, vesicouterine folds, the posterior wall of the urinary bladder is separated from the anterior wall of the cervix in an acute and blunt way to the level of the beginning of the middle third of the vagina. Under close control of the ureters, the posterior peritoneum covering the posterior cervix is excised from both sides, carefully dissecting the lateral sheets of the broad ligament, without injuring the ureters taken on the turnstile. The uterine vessels are carefully isolated. At the level of the isthmus of the uterus, the ascending and descending branches of the uterine vessels are carefully separated, and the descending branches of the uterine vessels are crossed and ligated on both sides.

Acutely, the ureters are secreted along the length from the entrance to the small pelvis to the point of intersection with the uterine vessels. The cervix is retracted in the proximal direction, the uterine vessels laterally, the bladder down. Under strict visual control of the position of the ureters, the parametric tissue is crossed by the vesicouterine ligaments in the front and the rectal-uterine ligaments in the back, intersected, tied and fixed with clamps. In a blunt way, the posterior layer of the peritoneum is separated from the posterior wall of the vagina, thereby pushing back the anterior wall of the rectum at a safe distance. The cardinal

ligaments are transected and ligated on both sides and fixed with clamps. Removal of the cervix is performed by applying clamps to the paravaginal tissue and the vaginal tube at the border of the upper and middle third of the vagina by excision of all sections.

The soft tissues held by the clamps are sewn and tied. The walls of the vagina are fixed with 6 ligatures on the clamps.

After the above manipulations, the uterus with the upper third of the excised vaginal wall is gently held on the hands, proceeding with the resection of the cervix.

The level of resection of the cervix in each case is determined individually strictly perpendicular to the axis of the uterus, depending on the parameters of the tumor. With a scalpel, the cervix is cut off from the body of the uterus, following strictly perpendicular to the axis of the uterus. To assess the adequacy of the removal of the cervix, an urgent histological examination of the incision line is performed. After that, the rest of the body of the uterus is gradually sutured with atraumatic needles and vicryl threads and fixed to the middle third of the vaginal tube. If necessary, in order to reduce the lumen of the vagina, after an adequate comparison with the body of the uterus, the walls of the vagina are sutured with lateral sutures. The blood supply to the remaining uterus and appendages is monitored. After the completion of the reconstructive stage and revision, it begins to restore the integrity of the round ligaments after removing the napkins from the obturator fossa. The integrity of the anterior and posterior layers of the peritoneum is restored, thereby anatomically separating the abdominal cavity from the small pelvis.

At the final stage of the operation, a Z-shaped suture is tied up and excised at the bottom of the uterus. The adequacy of the blood supply to the uterus and its appendages is re-assessed, the ilio-obturator zone remains non-peritoneal for the outflow of lymph and the prevention of lymphocyst formation. Douglas space is drained with silicone drains. The anterior abdominal wall is sutured in layers after revision and debridement.

2. RESULTS AND DISCUSSION:

Radical abdominal trachelectomy in women with cervical cancer of fertile age suggests an urgent histological examination of the incision line and removed lymph nodes. In the presence of tumor cells, the operation continues according to the standard method of treatment of extended extirpation of the uterus without appendages and transposition of the ovaries, the average duration of the operation is 140 ± 28.7 min, blood loss is $420 + - 50$ ml. Epithelialization of the uterine stump continues from 5 to 8 weeks after surgery. The necessary procedure at this stage is ointment swabs of the granulation site and periodic gentle bougienage of the cervical canal. In the observed patients, the menstrual cycle is restored from 1 to 3 months, in 1 patient 5 months after the operation, amenorrhea occurred, which is possibly associated with insufficiency of the supply vessels. In 2 patients in the postoperative period, lymphatic cysts (lymphocele) were formed, in the 1st patient after conservative therapy, in the 2nd patient after puncture and evacuation of the cyst contents, the pathological focus was eliminated.

Dynamic observation of patients showed that the subjective state is satisfactory, gynecological and general status, cytological examination of smears from the uterine stump and vaginal walls without pathological changes. According to the indications, ultrasound of the abdominal cavity and small pelvis, R examination of the lungs, determination of the level

of sex hormones and CA 125, the level of phosphorus and calcium in the blood were performed.

No patient had a relapse or metastasis of cervical cancer (up to 42 months from the first operation). In the postoperative period, the patients planned to realize the reproductive function, but due to the insufficient period, it has not yet been implemented.

We have developed and performed a modified RAT technique, when total or partial resection of the affected part of the cervix is performed after complete mobilization of the cervix and excision of the upper and middle third of the vagina.

According to the results obtained to date, the oncological effectiveness of RAT is not inferior to the standard extended extirpation of the uterus. It increases not only the quality of life of the young organism, but also restores menstrual and reproductive function.

In conclusion, we presented the results obtained from our own experience with the use of RAT. Ahead of us is the assessment of not only the subjective, but also the objective state of the young patient, the study of reproductive behavior and quality of life, as well as long-term results of treatment.

3. REFERENCES

- [1] Antipov V.A., Novikova E.G., Balakhontseva O.S., Shevchuk A.S. Radical abdominal trachelectomy: technical aspects // *Problems of Oncology*, 2010, v.56, No. 1 p.36-42
- [2] Novikova E.G. Organ-preserving treatment of patients with early forms of cervical cancer: Diss. honey. sciences. M., 1989.
- [3] Novikova E.G., Chissov V.I., Chulkova O.V. et al. Organ-preserving treatment in gynecological oncology, M., 2000 - p.108.
- [4] Rasool N, Rose PG. Fertility-preserving surgical procedures for patients with gynecologic malignancies. [Review]. *Clin Obstet Gynecol.* 2010;53:804–814.
- [5] Abu-Rustum NR, Sonoda Y. Fertility-sparing radical abdominal trachelectomy for cervical carcinoma. *Gynecol Oncol.* 2007;104:56–59.
- [6] Plante M, Renaud MC, François H, Roy M. Vaginal radical trachelectomy: an oncologically safe fertility-preserving surgery. An updated series of 72 cases and review of the literature. *Gynecol Oncol.* 2004;94:614–623.
- [7] Dargent D, Brun JL, Roy M, Remy I. Pregnancies following radical trachelectomy for invasive cervical cancer. *Gynecol Oncol.* 1994;52:105.
- [8] Smith JR, Boyle DC, Corless DJ, et al. Abdominal radical trachelectomy: a new surgical technique for the conservative management of cervical carcinoma. *Br J Obstet Gynaecol.* 1997;104:1196–1200.
- [9] Del Priore G, Ungar L, Smith JR. Complications after fertility-preserving radical trachelectomy. *Fertil Steril.* 2006;85:227.
- [10] Einstein MH, Park KJ, Sonoda Y, et al. Radical vaginal versus abdominal trachelectomy for stage IB1 cervical cancer: a comparison of surgical and pathologic outcomes. *Gynecol Oncol.* 2009;112:73–77.
- [11] Marchiole P, Benchaib M, Buenerd A, Lazlo E, Dargent D, Mathevet P. Oncological safety of laparoscopic-assisted vaginal radical trachelectomy (LARVT or Dargent's

- operation): a comparative study with laparoscopic-assisted vaginal radical hysterectomy (LARVH). *Gynecol Oncol.* 2007;106:132–141.
- [12] Saso S, Ghaem-Maghami S, Chatterjee J, et al. Abdominal radical trachelectomy in West London. *BJOG.* 2012;119:187–193.
- [13] Marchiole P, Tigaud JD, Costantini S, et al. Neoadjuvant chemotherapy and vaginal radical trachelectomy for fertility-sparing treatment in women affected by cervical cancer (FIGO stage IB-IIA1). *Gynecol Oncol.* 2011;122:484–490.
- [14] Buda A, Fossati R, Colombo N, et al. Randomized trial of neoadjuvant chemotherapy comparing paclitaxel, ifosfamide, and cisplatin with ifosfamide and cisplatin followed by radical surgery in patients with locally advanced squamous cell cervical carcinoma: the SNAP01 (Studio Neo-AdjuvantePortio) Italian Collaborative Study. *J Clin Oncol.* 2005;23:4137–4145.
- [15] Persson J, Kannisto P, Bossmar T. Robot-assisted abdominal laparoscopic radical trachelectomy. *Gynecol Oncol.* 2008;111:564–567.
- [16] Geisler JP, Orr CJ, Manahan KJ. Robotically assisted total laparoscopic radical trachelectomy for fertility sparing in stage IB1 adenocarcinoma of the cervix. *J Laparoendosc Adv Surg Tech A.* 2008;18:727–729.
- [17] Chuang LT, Lerner DL, Liu CS, Nezhat FR. Fertility-sparing robotic-assisted radical trachelectomy and bilateral pelvic lymphadenectomy in early-stage cervical cancer. *J Minim Invasive Gynecol.* 2008;15:767–770.
- [18] Burnett AF, Stone PJ, Duckworth LA, Roman JJ. Robotic radical trachelectomy for preservation of fertility in early cervical cancer: case series and description of technique. *J Minim Invasive Gynecol.* 2009;16:569–572.
- [19] Ramirez PT, Schmeler KM, Malpica A, Soliman PT. Safety and feasibility of robotic radical trachelectomy in patients with early-stage cervical cancer. *Gynecol Oncol.* 2010;116:512–515.
- [20] Hong DG, Lee YS, Park NY, Chong GO, Park IS, Cho YL. Robotic uterine artery preservation and nerve-sparing radical trachelectomy with bilateral pelvic lymphadenectomy in early-stage cervical cancer. *Int J Gynecol Cancer.* 2011;21:391–396.
- [21] Falcone T, Goldberg JM, Margossian H, Stevens L. Robotic-assisted laparoscopic microsurgical tubal anastomosis: a human pilot study. *Fertil Steril.* 2000;73:1040–1042.
- [22] Chalian R, Licciardi F, Rebarber A, Del Priore G. Successful infertility treatment in a cancer patient with a significant personal and family history of cancer. *J Womens Health (Larchmt).* 2004;13:235–237.