ISSN: 0975-833X

Available online at http://www.journalcra.com

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

International Journal of Current Research
Vol. 13, Issue, 05, pp.17367-17370, May, 2021

DOI: https://doi.org/10.24941/ijcr.41382.05.2021

RESEARCH ARTICLE **OPEN ACCESS**

RADICAL ABDOMINAL TRACHELECTOMY IN THE TREATMENT FOR CERVICAL CANCER IN YOUNG WOMEN

***Navruzova, V.S., Yuldasheva, N.S. and Akhmedov, O.M.**

National Cancer Research Center, MH RUz

ARTICLE INFO

Article History:
Received 09th February, 2021
Received in revised form
14th March, 2021
Accepted 20th April, 2021
Published online 20th May, 2021

Key Words:
Cervical Cancer, Young Woman, the Fertility-Sparing Surgery, Radical Abdominal Trachelectomy, Quality of Life.

ABSTRACT

In recent years there seen an increased incidence among women of fertile age (at the age of 28-45 years). In the Republic of Uzbekistan about 60% of CC are revealed in stage 1-2. Conservative treatment for early stage cervical cancer allows to save the life of a patient in most cases, however, leads to irreversible loss of fertility, depressions of different gravity, stress disorders and sexual dysfunction. Look forward to continued work produced in this area and have a score not only subjective, but also the objective status of a young woman, the study of reproductive behavior and quality of life, as well as remote results.

Citation: Navruzova, V.S., Yuldasheva, N.S. and Akhmedov, O.M. "Radical Abdominal Trachelectomy In The Treatment For Cervical Cancer In Young Women*", 2021. International Journal of Current Research, 13, (05), 17367-17370.*

INTRODUCTION

Malignant neoplasms of fertile age women are the most common cancers in the structure of oncological diseases. Their overall total part comprises more than 38% of common morbidity of malignant tumors. According to WHO, some 550,000 cases of cervical cancer (CC) are diagnosed worldwide each year, and about half as many people die from the disease. In 2012, in the Republic of Uzbekistan, there registered 1323 patients with cervical cancer and 623 deaths from this disease. In recent years there seen an increased incidence among women of fertile age. In our republic the disease often occurs at the age of 28-45 years and about 60% of CC are revealed in stage 1-2. Conservative treatment for early stage cervical cancer allows to save the life of a patient in most cases, however, 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 effects of infertility caused by the treatment for malignant tumor are extremely negative.

Corresponding author:** ***Navruzova, V.S.,
National Cancer Research Center, MH RUz.

Besides the fact of unrealized reproductive function, most of young women in this group have depressions of different gravity, stress disorders and sexual dysfunction. Features of morphogenesis and carcinogenesis of cervical cancer, high survival rates in early stage and increase of the number of reproductive age patients task the oncogynecologists to improve the quality-of-life for young women with cancers by retaining fertility. Based on these circumstances, it became necessary to develop and implement the fertility-sparing surgery - radical abdominal trachelectomy. Cervical cancer is characterized mainly by local spread of cancer. Most often there is a tumor spread to the upper parts of vagina, parametric tissue and sacrouterine ligaments. Tumor growth on uterine upper parts is less common 13-15% of cases. In early stages CC the tumor mostly affects zone of transformation , in 28-34% of patients the tumor is localized in the lower segment of cervical canal, 15% of them - in the middle and 2% - the upper segment. The middle and lower third of vagina is affected in advanced stages CC and is rarely observed. Metastasized cervical cancer depends on histological structure of the tumor. According to other authors' data, squamous cervical cancer metastases in the ovaries vary from 0.2% to 2.2% and 4-10 % in adenocarcinoma. Oophorectomy necessity remains disputable for early stage cervical adenocarcinoma, i.e., the rate of metastasis is low in this period.

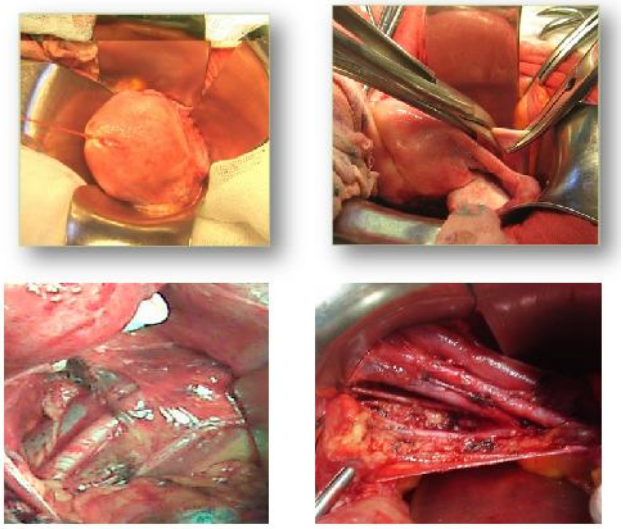
Lymphatic cancer spread in CC affects parametric, obturator, iliac, sacro-sacral, presacral, lateral, aortic lymph nodes. The most significant prognostic factors in CC influencing the treatment option are tumor size, invasion depth, parametral tissue infiltration, metastases to regional lymph nodes, tumor morphological parameters.

MATERIALS AND METHODS

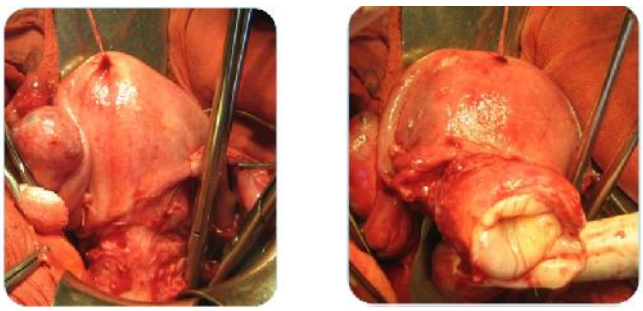
The aim of the work is to study the quality of life for patients with cervical cancer using fertility-sparing surgery. In the gynecology department of NCRC of MH RUz there performed fertility-sparing surgeries for fertile age women with early stage cervical cancer. The patients ranged between 27 to 37 years. Patients were examined clinically and instrumentally. The careful collected history of the patients included genital and extragenital diseases and conditions. Objective gynecological examination which gives the possibility to determine the spread of cervical tumors, growth form and ratio to vaginal walls, condition of parametral tissue and local regional lymph nodes. Biopsies taken from the affected zone were investigated morphologically. All women had squamous cell cervical cancer. 2 women had non- keratinizing squamous cancer, 5 women had keratinizing squamous cancer. The anamnesis of the degree of differentiation of tumor showed that 3 patients had high differentiated and 4 patients had moderately differentiated cervical cancer.

The abdominal method of radical trachelectomy includes partial or total hysterectomy, upper third of the vagina, pelvic tissue around the cervix and vagina, vesico-uterine, sacro-uterine and cardinal ligaments, general, internal and external iliac vessels. The main difference RAT from RH with appendages is not only retaining of uterus, ovaries and fallopian tubes, but also further reproductive function. The success of surgery depends not only on the knowledge of topographic and anatomical features of pelvic organs, but also on the level of technical training of a surgeon and the option of anesthetic technique. RAT is performed under general combined anesthesia and starts with midline laparotomy and setting of wound dilators to improve the view of operative field. Revision of abdomen and pelvic organs makes possible to analyze abdominal and pelvic cavities. There is particular importance of the presence of adhesive processes after various additional interventions in these areas and it may be accompanied with functional or organic changes of different character. There made screening and examination of topographic-anatomic of uterus structure and appendages, vessel conditions, surrounding organs and tissues, retroperitoneal space and ureter visually and by palpation. If there is a free liquid in pelvis or side channels, it is aspirated for urgent cytological test. To estimate the condition of ovaries should be noticed the structure, the presence of cysts or cystic formations of solid character, if necessary, it is resected with urgent histological test within the surgery. We study the state of parietal and visceral peritoneum, the presence of disseminates or any other changes. Abdominal revision of bowel loops in Trendelenburg position are transferred to upper part of the abdomen and isolated from the pelvis. Fundus of uterus is stitched with Z shaped silk suture and fixed with forceps to free movement of the uterus during the operation, as needed. This procedure is performed to avoid the trauma of ovaries, fallopian tubes and uterus vessels which supply these organs.

The first stage of surgery is the dissection of pelvic lymph node which makes possible to follow the principles of radical surgical treatment for CC in order to avoid loco-regional spread of tumor.

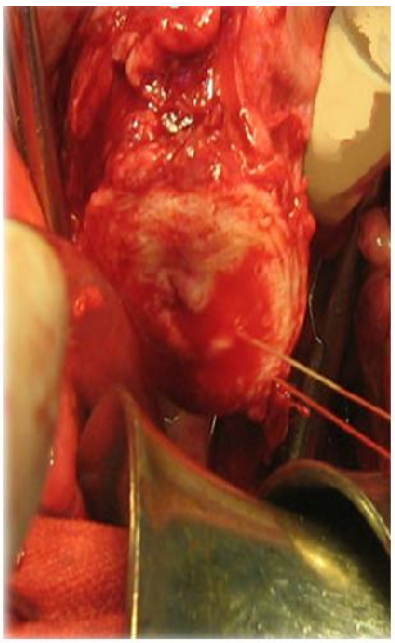


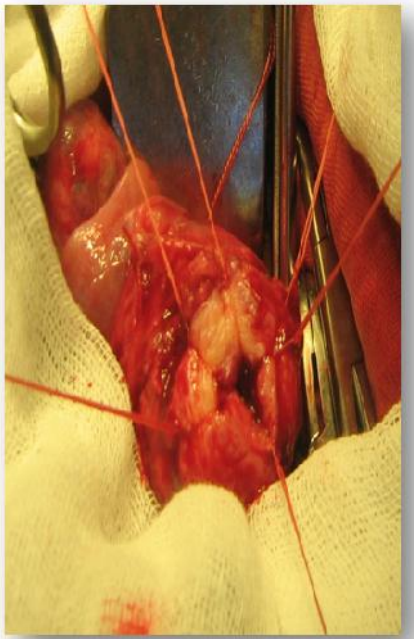
Round ligaments are dissected alternately on both sides and open the access to the iliac region. They perform lymphodissection tissue around common, external and internal iliac vessels up to obturator pit, around the obturator nerve, cervix of the uterus and upper third of the vagina. On dissection a particular attention should be paid on careful coagulation and ligation of lymphatic vessels in order to reduce postoperative lymphorrhea. After lymphadenectomy it is performed the tamponade of obturator zone with gauze soaked with 96% ethanol on both sides gradually. After completion of lymphodissection on both sides with the absence of these metastases in lymph nodes the second step of surgery begins. This step includes complete or partial removal of the cervix, depending on the location and size of the initial lesion with the upper third of the vagina, and paracervix and paravaginal tissue, cardinal, sacro-uterine and vesico-uterine ligaments.



The main task at this step of surgery is not only to preserve the body of uterus, ovaries and fallopian tubes, but also to preserve vessels which adequately supply these organs. Thereby, special attention is paid to careful regard for uterine and ovarian vessels. After dissection of peritoneum, vesico-uterine folds with sharp and blunt dissection they separate from the front wall of uterine neck the posterior wall of bladder to the level of the beginning of middle third of the vagina. To control carefully the ureters on both sides they excised the back leaf of peritoneum which covers the back leaf of the cervix, cautiously excising the lateral leaves of broad ligament, not injuring the ureters taken at tourniquet.

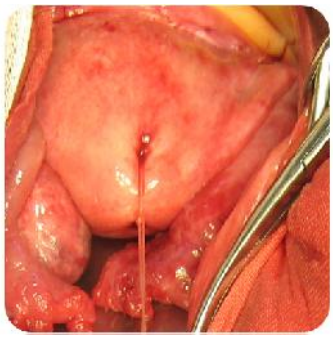
Uterine vessels are carefully exposed. At the level of the isthmus of uterus the ascending and descending branches of uterine vessels are carefully separated, crossed and ligated the descending branches of uterine vessels on both sides.





Ureters are sharply distinguished over the inlet of pelvis to decussation with uterine vessels. Cervix is abducted in a proximal direction, uterine vessels laterally, bladder down. Under strict monitoring of ureters' positions vesico-uterine ligaments in front and recto-uterine ligaments behind are decussated, ligated and fixed on forceps. Back leaf of peritoneum is separated from the posterior wall of vagina with blunt dissection, thus moves back the front wall of the rectum at a safe distance. Cardinal ligaments are crossed and ligated on both sides and fixed on forceps. Removal of the cervix is performed by clipping on paravaginal tissue and vaginal tube to upper and middle third of vagina excising all sections. Soft tissues, held on forceps, are stitched and ligated. Vaginal walls are fixed on forceps with 6 ligatures. After these manipulations the uterus excised from the upper third of the vaginal wall are carefully kept on hands and the resection of cervix is started.

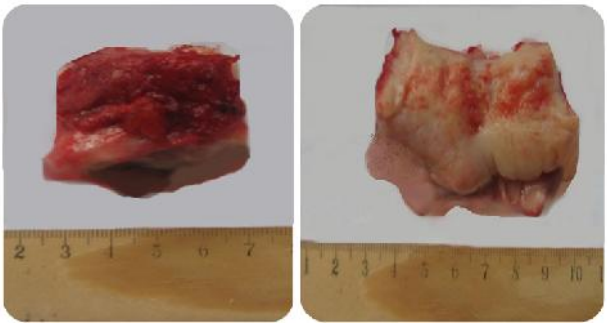
The level of cervical resection in each case is determined individually perpendicular to the axis of the uterus, depending on the tumor parameters. Using a scalpel the cervix is cut away from the body of uterus, following the axis of uterus exactly perpendicular. To evaluate the adequacy of cervix removal the histological investigation of the cut line is performed. Thereafter, the remainder of uterus body are gradually sutured with eyeless needles and vicryl threads and fixed to the middle third of vaginal tube. If necessary, in order to reduce vaginal lumen after an adequate juxtaposition with the body of uterus vaginal walls are stitched with side sutures. Blood supply of remaining uterus and appendages is monitored. After the completion of reconstructive step and revision, the restore of continuity of round ligaments after removal of gauze material from the obturator pits begins. The continuity of front and back leaves of peritoneum is restored, and the abdominal cavity separates from the pelvic area anatomically.



At the final stage of surgery, Z-shaped suture is excised and ligated at the bottom of the uterus. Re-evaluate the adequacy of blood supply to the uterus and its appendages, the iliac-obturator area remains nonperitonized for lymphatic drainage and prevention of lymph cyst formation. Douglas' pouch is drained by silicone drains. Anterior abdominal wall is sutured in layers after revision and sanitation.

RESULTS AND DISCUSSION

Radical abdominal trachelectomy in women with CC of fertile age suggests urgent histological examination of the cut line and lymph nodes removed. In the presence of tumor cells the surgery is performed by standard method of treatment, extended hysterectomy without appendages and transposition of ovaries, median surgery duration of 140 ± 28,7 min, blood loss of 420 + - 50 ml. Epithelialization of uterine stump lasts from 5 to 8 weeks after surgery. Ointment tampons in granulating area and periodic gentle probing of cervical canal is necessary procedure at this stage. In examined patients the menstrual cycle recovers from 1 to 3 months, 1 patient has had amenorrhea after 5 months of surgery that is probably due to lack of feeding vessels. 2 patients have formed lymphatic cysts in post-operative period, 1 patient - after conservative therapy, in 2 patients – after the puncture and evacuation of cyst content the pathological focus has been eliminated. Dynamic monitoring of patients has shown that the subjective state is adequate, no pathological changes in gynecological and general status, cytology smears from the stump of the uterus and vaginal walls. There performed ultrasound diagnostics of the abdomen and pelvis, X-ray examination of lungs, and determined the level of sex hormones and CA 125, levels of phosphorus and calcium in blood. No one patient relapse and metastasis of cervical cancer have been identified (up to 42 months from the first surgery).



Postoperatively, patients have been scheduled implementation of reproductive function, but it is not yet performed because of the short period of time. We have developed and implemented a modified RAT technique, when total or partial resection of affected part of the cervix is performed after complete mobilization of the cervix and excision of upper and middle third of vagina. According to the outcomes of women treated in this manner, today, we suggest that the more accessible and successful RAT is not inferior to the standard extended hysterectomy. Not only the quality of life of a young woman increases, but also menstrual and reproductive function restores. In conclusion, we presented the results of our own experience of RAT. We look forward to continued work produced in this area and have a score not only subjective, but also the objective status of a young woman, the study of reproductive behavior and quality of life, as well as remote results.

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