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**Uterine artery embolization in advanced stages of cervical cancer (clinical case)***Saratov State Medical University named after V.I. Razumovsky, department of Obstetrics and Gynecology of the Medical faculty**Scientific Supervisor: ass. Naumova J.V.***Key words:** cervical cancer, uterine artery

Cervical cancer remains the largest spread oncological gynecological disease in the world. By the statistics of the international agency for the research of cancer, there are three hundred and seventy one thousand (371,000) new cases of cervical cancer registered yearly and an estimated number of one hundred and ninety thousand (190,000) women dying annually from cervical cancer [1]. In the general structure of diseases affecting organs of the female reproductive system in Russia, cervical cancer is third behind breast cancer and uterine cancer respectively. In Russia twelve thousand (12000) new cases are registered and six thousand (6000) deaths occur every year [2,5].

By the statistics gathered by the European Association of Genital Infections and Neoplasms (EUROGIN) in 2003, more than 99% of the cases of cervical cancer was caused by the highly oncogenic Human Papilloma Virus (HPV) [5,8].

Cervical cancer is the visual form of the disease, therefore its early detection has challenges, for this reason, it is beneficial to do thorough, accurate and more informative investigations morphologically and endoscopically.

Also, modern techniques and treatments for the precancerous processes of cervical cancer have emerged to prevent its development. Assessment based on the modern research and investigation of oncological diseases has shown that there has been a significant increase in cases. Oncologists in the country have testified to the increasing indicators with patients coming in with advanced stages of the disease, the following statistics show the trend between 2006 and 2010 of the increase in the number of patients with advanced cervical cancer (2006 - 34,2%, 2008 - 37,1% and 2010 - 38,8%) [10,11]. In certain regions in Russia these percentages were slightly increased.

Consequently, this reveals an increase of recorded cases in a particular age group to be specific young women up to the age of forty years with a significant trend in the increase of cases of women who turned 29 years, yearly increase in these cases stands at (2,1%) [11].

The typical clinical feature of cervical cancer affecting internal organs is uterine bleeding which serves as a huge setback for medical interventions such as radio and chemotherapy [4]. The challenge uterine bleeding poses for haemostatic interventions is usually due to the unique form of vascularization of the uterus and the numerous network of pathological anastomoses that grow between the branches of the internal iliac artery [6]. Conservative interventions for bleeding during this condition is ineffective due to the fact that vessels are irresponsive to vasoconstrictors [9].

Also surgical interventions are largely unreliable considering an anaemia, presence of a huge tumor, concomitant pathology which constitutes a huge risk on the operation table and the high probability of complications developing and, as a rule, are not feasible [5]

Laparotomic ligation of the iliac arteries do not always end up with the desired results of haemostasis because this method does not discontinue bleeding from the pathologic network of vessels formed between the internal iliac arteries [6,9,10].

It is documented in literature about the successes chalked using x ray–endoscopic operations in the treatment of the hemorrhagic syndrome that occurs in the cancer of the genitals [6,9].

Hypothetically, embolization of uterine vessels in this pathology indirectly affects the immune system by activating programmed cancer cell death (apoptosis), and helps to reduce the size of the tumor, this contributes positively to the reduction of the tumor [5,8].

In the year 2014, the gynecological department of the First City Clinical Hospital (FCCH), Saratov made its first diagnosis of cervical cancer for twenty two (22) patients, with twelve (12) out of the total number being diagnosed with the advanced forms. The main reason influencing the patients decision to visit the hospital is recurrent genital tract bleeding with different intensities.

In the gynecological department of 1 st. Saratov State Clinical hospital, the method of embolization of the uterine artery and branches of the internal iliac artery supplying the tumor has been widely introduced as the main tactic for the management of hemorrhagic syndrome. This technique is highly effective in stopping the bleeding and preventing its recurrence.

**Clinical Case**

On the 1st of February, 2015, a patient of forty four (44) years of age was brought in by ambulance with complaints of heavy bleeding from the genital tract, severe lower abdominal pain, general weakness, dizziness. From the history taken patient has experienced non menstrual heavy bleeding all week from the genital tract. Her gynecological history revealed that she has had no children even though she has had two induced abortions of a total of two pregnancies, no gynecological diseases worthy of note, at age 30, she was diagnosed with ectopy of the cervix which was treated with diathermocoagulation. Over the past five years (5) patient had no gynecological check-ups.

Upon examination, the patients' state was critical as a result of severe intoxication and anemia, pallor was observed and she was warm to touch. Patient was conscious but answered questions discretely. Heart sounds were audible with reduced intensity, marked tachycardia of 129 beats per minute. During vaginal examination the cervix had evolved into crater formations separated by tumor masses, dome of the vagina and the superior one third of its wall had been infiltrated by the cancerous cells, other parts infiltrated included the pelvis up to the level of the umbilicus forming the upper border of infiltration, genital tract bleeding was moderate. A full blood count of the patient

conducted revealed severe anemia (hemoglobin level was reduced to 30 g / l, erythrocytes  $1.2 \times 10^{12}/l$ , hematocrit 16%), marked leukocytosis ( $32 \times 10^9/l$ ). Biopsy of the cervix was taken, patient was transfused with blood containing fresh plasma.

Embolization on both sides of the internal iliac arteries was conducted to reduce further blood loss. The early postoperative period was uneventful, bleeding did not recur. Hence further examination (Ultra Sound of the genitals, abdominal ultrasonography, barium enema, cystoscopy, chest X-ray), and correction of the anemia were carried out.

Histological investigation of the biopsy carried out on the 9<sup>th</sup> of February, 2015 revealed a growth of non keratinizing squamous cell carcinoma at a stage of T2B Nx M0. It was advised she underwent radiotherapy on an outpatient basis at the oncology centre, she was discharged in a stable condition

### Conclusions

The clinical case confirms an asymptomatic disease in the early stages and its manifestation process only occurring in its far advanced forms. I will recommend regular clinical examination of women, as well as the inclusion of annual cytological screening in the national program, this will allow timely detection of cervical pathology, as well as reduce the number of patients with advanced forms of cancer.

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