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Features of the post-operating period after the endometrial ablation in post-menopausal aged women with hyperplastic processes of endometrium

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The paper presents the results of surgical treatment of 45 postmenopausal women with non-atypical forms of endometrial hyperplasia.
The objective: **is to establish the features of the postoperative period depending on the method of endometrial ablation in postmenopausal patients with endometrial hyperplastic processes.**
Materials and methods**. The study included 45 women with non-atypical forms of endometrial hyperplasia: 25 women of postmenopausal age with non-atypical forms of endometrial hyperplasia, who were treated with hysteroscopic monopolar ablation of the endometrium and 20 women of postmenopausal age with non-atypical forms of endometrial hyperplasia, who underwent radiowave endometrial ablation. In the postoperative period, on 3, 7 days and after 1, 3, 6, 12, 24 months, the complaints, the general condition, the nature of the discharge from the genital tract were evaluated, gynecological examination with ultrasound examination of the pelvis were provided, office hysteroscopy or endometrial aspiration from the uterus were provided according to indications.**
Results**. It is advisable to recommend endometrial ablation for the patients with non-atypical forms of postmenopausal endometrial hyperplasia as an alternative to hormonal treatment or hysterectomy. The efficiency of radiowave ablation of the endometrium with non-atypical forms of endometrial hyperplasia is 85.0%. The effectiveness of monopolar hysteroscopic ablation of the endometrium in women with non-atypical forms of endometrial hyperplasia is 96.0%. In the case of recurrence of the endometrial hyperplastic process (bleeding, thickening of the M-echo according to ultrasound data), hysteroscopy is shown with mandatory hystopathological studies and diagnosis verification.**
Conclusions**. After ablation of the endometrium, follow-up is advisable for two years. The method of choice for follow-up observation of the state of the endometrium of the uterus in women after endometrial ablation is transvaginal ultrasound, which is performed after 1, 3, 6, 12 and 24 months of observation.**
Key words: *endometrial hyperplastic processes, postmenopausal women, endometrial ablation.*

Особливості перебігу післяопераційного періоду після абляції ендометрія у жінок постменопаузального віку з гіперпластичними процесами ендометрія

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У статті представлено результати оперативного лікування 45 жінок постменопаузального віку з неатиповими формами гіперплазії ендометрія.
Мета дослідження: визначення особливостей перебігу післяопераційного періоду залежно від методу абляції ендометрія у хворих постменопаузального віку з гіперпластичними процесами ендометрія.
Матеріали та методи. У дослідження було включено 45 жінок з неатиповою формою гіперплазії ендометрія: 25 жінок постменопаузального віку з неатиповими формами гіперплазії ендометрія, яким була проведена гістероскопічна монополярна абляція ендометрія, та 20 жінок постменопаузального віку з неатиповими формами гіперплазії ендометрія, яким була проведена радіохвильова абляція ендометрія. У післяопераційний період на 3, 7-й день та через 1, 3, 6, 12, 24 міс проводили оцінювання скарг, загального стану, характер виділень зі статевих шляхів, гінекологічний огляд з УЗ-дослідженням малого таза, за показаннями – офісну гістероскопію або аспірацію ендометрія з порожнини матки.
Результати. Хворим постменопаузального віку з неатиповими формами гіперплазії ендометрія як альтернативу гормонального лікування або гістеректомії доцільно рекомендувати абляцію ендометрія. Ефективність радіохвильової абляції ендометрія при неатипових формах гіперплазії ендометрія становить 85,0%. Ефективність монополярної гістероскопічної абляції ендометрія у жінок з неатиповими формами гіперплазії ендометрія становить 96,0%. У випадку рецидиву гіперпластичного процесу ендометрія (кровомазання, потовщення М-еха за даними УЗД) показано проведення гістероскопії з обов'язковим патогістологічним дослідженням та верифікацією діагнозу.
Заключення. Після абляції ендометрія доцільна диспансеризація протягом двох років. Методом вибору для диспансерного спостереження за станом ендометрія матки у жінок після його абляції є транспіхвове ультразвукове дослідження, яке необхідно проводити через 1, 3, 6, 12 та 24 міс спостереження.
Ключові слова: *гіперпластичні процеси ендометрія, жінки постменопаузального віку, абляція ендометрія.*

Особенности течения послеоперационного периода после абляции эндометрия у женщин постменопаузального возраста с гиперпластическими процессами эндометрия

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В статье представлены результаты оперативного лечения 45 женщин постменопаузального возраста с неатипическими формами гиперплазии эндометрия.
Цель исследования: определение особенностей течения послеоперационного периода в зависимости от метода абляции эндометрия у больных постменопаузального возраста с гиперпластическими процессами эндометрия.
Материалы и методы. В исследование были включены 45 женщин с неатипической формой гиперплазии эндометрия: 25 женщин постменопаузального возраста с неатипическими формами гиперплазии эндометрия, которым была проведена гистероскопическая монополярная абляция эндометрия, и 20 женщин постменопаузального возраста с неатипическими формами гиперплазии эндометрия, которым была проведена радиоволновая абляция эндометрия. В послеоперационный период на 3, 7-й день и через 1, 3, 6, 12, 24 мес проводили

оценку жалоб, общего состояния, характера выделений из половых путей, гинекологический осмотр с УЗ-исследованием малого таза, по показаниям – офисную гистероскопию или аспирацию эндометрия из полости матки.

Результаты. Больным постменопаузального возраста с неатипическими формами гиперплазии эндометрия как альтернативу гормонального лечения или гистерэктомии целесообразно рекомендовать абляцию эндометрия. Эффективность радиоволновой абляции эндометрия при неатипических формах гиперплазии эндометрия составляет 85,0%. Эффективность монополярной гистероскопической абляции эндометрия у женщин с неатипическими формами гиперплазии эндометрия составляет 96,0%. В случае рецидива гиперпластического процесса эндометрия (кровянистые выделения, утолщение М-эхо по данным УЗИ) показано проведение гистероскопии с обязательным патогистологическим исследованием и верификацией диагноза.

Заключение. После абляции эндометрия целесообразна диспансеризация в течение двух лет. Методом выбора для диспансерного наблюдения за состоянием эндометрия матки у женщин после его абляции является трансвагинальное ультразвуковое исследование, которое необходимо проводить через 1, 3, 6, 12 и 24 мес наблюдения.

Ключевые слова: *гиперпластические процессы эндометрия, женщины постменопаузального возраста, абляция эндометрия.*

In recent decades, in Ukraine, as in most countries of the world, there has been a tendency to an increase in the frequency of hormone-dependent tumors, primarily hyperplastic processes, including endometrial hyperplastic processes (HPE).

HPE is a multifactorial topical problem of theoretical and clinical medicine and, according to ukrainian and foreign authors, occupy one of the leading places in the structure of gynecological pathology, their frequency ranges from 14% to 83%. This pathology is one of the frequent causes of hysterectomy and a decrease in the quality of life [1, 2, 5, 6, 7].

The urgency of the problem is determined by the possibility of the transformation of HPE into endometrial cancer. Numerous studies confirm the likelihood of oncological processes on the background of HPE, which is possible in 4–67.2% of patients [4, 5, 8].

Epidemiological studies show that gynecological morbidity in postmenopause is currently characterized by an increase, and the frequency of neoplastic processes in the genitals takes the second place after malignant tumors of the mammary gland [1, 9].

One of the important factors for the prevention of endometrial cancer is the early diagnosis and timely treatment of patients with HPE.

Interest in this pathology is also due to the tendency for a prolonged and recurrent course, the absence of specific, pathognomonic symptoms, the complexity of differential diagnosis, the difficulty of individualizing treatment [2, 7].

Also, at present, in the modern population of women there is a tendency to increase the average age of menopause, which, according to the literature, approaches in 52–53 years [2, 3, 7].

It is important to emphasize that this age group is women who are at the peak of their professional and social activities, but it is the state of health that determines the quality of their performance, which is key to establishing the social significance of this problem.

In the group of postmenopausal patients, a significant percentage of concomitant extragenital pathology is observed, which leads to the presence of high risks of developing postoperative complications during radical surgical intervention, as well as a high frequency of functional disorders in the postoperative period.

With the development and implementation of minimally invasive technologies in gynecological practice, the problem of surgical treatment of patients in postmenopausal age with HPE has received a new stage of development. One of the innovative methods of treating women with HPE is endometrial ablation, the essence of which is hysteroscopic removal or thermal ablation of the basal layer of endometrium in order to achieve uterine amenorrhea [1, 5, 8]. Therefore, the development and implementation of therapeutic algorithms for treating women in postmenopausal age with non-atypical forms of HPE using minimally invasive methods is a priority of modern gynecology.

The objective: is to establish the features of the postoperative period depending on the method of endometrial ablation in postmenopausal patients with endometrial hyperplastic processes.

MATERIALS AND METHODS

The study included 45 women with non-atypical form of endometrial hyperplasia who were treated at the Center of General Gynecology of the Clinical Hospital «Feofaniya», gynecological department of the Kyiv city maternity hospital № 3.

Depending on the nature of the pathological process and the method of treatment, a randomized distribution of women into groups was carried out. Group 1 – 25 postmenopausal women with non-atypical forms of endometrial hyperplasia (simple and complex endometrial hyperplasia without atypia) who underwent hysteroscopic monopolar ablation of the endometrium. Group 2 – 20 postmenopausal women with non-atypical forms of endometrial hyperplasia who underwent radiowave ablation of the endometrium. Conducting a comparative analysis between groups of postmenopausal women with non-atypical forms of endometrial hyperplastic processes, it was found that the groups were not statistically different. In group 1, the age of patients ranged from 49 to 66 years, the average age was 56.3±3.9 years. In group 2, the age of patients ranged from 50 to 64 years old; the average age was 54.6±4.1 years.

All patients were examined according to the order of the Ministry of Health of Ukraine No. 676 of December 31, 2004. At the first stage, after a general clinical examination, the nature of the pathological process in the endometrium was determined by performing diagnostic hysteroscopy with curettage of the walls of the uterus and cervical canal, followed by histopathological verification of the diagnosis. Patients are divided into groups based on the nature of complaints, history and the presence of somatic and concomitant genital pathology.

Hysteroscopic monopolar ablation of the endometrium was performed using Karl Storz equipment under intravenous anesthesia, 5% glucose solution was used as a fluid to expand the uterus.

Radio-wave ablation of the endometrium (RWAE) was carried out using the device «Unitherm» – «DSM-UKRAINE» under local anesthesia. Taking into account the technical features of the application of the RWAE method, the study group did not include patients with submucous uterine leiomyoma and with a postoperative scar on the uterus, which limited the breadth of the method. After dilation of the cervical canal, an applicator was introduced into the uterine cavity with the determination of the temperature regime of 48–50 °C for 40 minutes. Four standard positions of the applicator were used to evenly influence on the walls of the uterus.

In the postoperative period, complaints were evaluated, body temperature was monitored, and the volume and nature of the discharge from the genital tract was assessed. Further dynamic follow up of patients after endometrial ablation was performed on an outpatient basis. On the 3, 7 days and after 1, 3, 6, 12, 24 months of the postoperative period, the complaints, the general condition, the nature of the discharge from the genital tract were evaluated, gynecological examination with ultrasound examination of the pelvis were provided, office hysteroscopy or endometrial aspiration from the uterus were provided according to indications. The observation period ranged from 1 to 7 years. When conducting a dynamic ultrasound study according to the review plan, the size of the uterus, the condition of the cavity, the structure of the endometrium and the presence of synechiae (adhesions) were evaluated, the condition of the ovaries was determined.

RESEARCH RESULTS AND DISCUSSION

The peculiarities of the methods of conducting hysteroscopic monopolar and RWAE are the fact that local anesthesia was used to conduct radio-wave ablation of the endometrium,

Table 1

Features of the postoperative period

Groups	1 group, n=25	2 group, n=20
Anesthesia	Intravenous	Local
Duration of operation	25.4±3.5	44.8±0.3
Intravasation syndrom, n (%)	2 (8.0)	0
Hyperthermia (subfebrile) in the first 3 days n (%)	14 (56.0)	17 (85.0)
Uterotonics prescriptions, n (%)	3 (12.0)	0
Hemostatic drugs, n (%)	3 (12.0)	0
Preoperative period, days	1	0,4
Duration of hospitalization, days	3.7±0.9	1.9±0.8
Genital discharges, days	18.6±4.7	26.1±3.8

whereas intravenous anesthesia was required for carrying out hysteroscopic monopolar ablation.

The duration of the hysteroscopic monopolar ablation of the endometrium was 28.6±5.5 minutes, and the radial incidence of endometrial ablation according to the standard procedure was 44.3±0.3 minutes (Table 1).

When conducting hysteroscopic monopolar ablation of the endometrium, 2 (8.0%) observations showed signs of fluid intravasation, an increase in blood pressure and tachycardia. This syndrome is medically corrected, but later women were under dynamic observation. It should be noted that after radio-wave ablation of the endometrium intraoperative complications were not observed.

The assessment of the postoperative period was carried out according to the nature of complaints, hemodynamic parameters, volume and features of secretions from the genital tract. The nature of the features of the postoperative period showed that low-grade body temperature was observed in 14 (56.0%) patients of the first group, and in 17 (85.0%) of the second group, the level of hyperthermia was 37.3–37.5 °C.

In 3 (12.0%) cases of the first group, abundant bleeding from the genital tract was observed on the first day of the postoperative period, for this category of patients uterotonics were administered during the day with a positive effect. The bleeding from the genital tract was observed for 18.6±4.7 days in women of the first group, and 26.1±3.8 days in women of the second group.

The duration of hospitalization for women of the 1st group was 3.7±0.9 days; patients of the 2nd group – 1.9±0.8 days; in this case, 6 (30.0%) patients from the second group underwent procedure in a day hospital department.

Within 3 months after surgery, according to the ultrasound data, women in group 1 observed a dynamic decrease in the size of the uterus, formation of fibrous tissue and synechiae, in 5 (20%) a thin liquid strip was observed 2–3 mm thick (table 2). At the 6th month of observation, a linear M-echo with a thickness of 2–3 mm, the presence of fibrosis and the presence of synechiae were determined by ultrasound.

Control examination after 1 year established a progressive increase of the quantity of synechiae in the uterus, the presence of fibrosis of the uterus. Relapse of the endometrial hyperplastic process during the year was not detected. When examined 2 years after endometrial ablation in 1 (4.0%) of the patient, the local endometrial thickening in the area of the uterine isthmus was determined, which is indication for hysteroscopy. During the hysteroscopy, it was established the presence of an endometrial polyp at the level of the cervical region with dimensions 2.2×1.8 cm, clinical manifestations (bleeding from the genital tract, pain) in this woman were not diagnosed.

An analysis of histopathological examination revealed the presence of an endometrial fibrous polyp. After polypectomy no recurrence was observed for 3 years of follow-up.

According to ultrasound, 1 (4%) observation 18 months after hysteroscopic monopolar ablation of the endometrium revealed the presence of a liquid component in the uterine cavity with a cavity widening up to 17 mm, the patient complained of periodic non-intensive pain in the lower abdomen. Hysteroscopic patients were diagnosed with obliteration of the cervical canal, the presence of multiple synechiae, serosometra of the uterine cavity wall with fibrous components and synechiae. Synechiae resection in the isthmical part of the uterine cavity was performed.

Analysis of the postoperative period in women of the second group who underwent endometrial radio-wave ablation for non-atypical forms of endometrial hyperplasia showed that for 3 days there was a moderate expansion of the uterus 0.4–1.4 cm, the presence of heterogeneous liquid contents, infiltration zone evenly, compacted and was 1.2–1.3 cm (table 3). During ultrasound examination in the area of infiltration there are no echo signals of the blood flow.

One month after the radio-wave ablation of the endometrium, an ultrasound study in 8 (40.0%) of women determined a thin layer of heterogeneous hypoechoic content up to 4 mm, the formation of synechiae.

A study conducted after 3 months of observation indicated the presence of a zone of fibrosis – increased echogenicity around the uterine slit cavity. Subsequently, under dynamic observation, the established zone of fibrosis up to 1–4 mm was found in the form of a strip. At 6 months of follow-up, 1 (5.0%) patients were diagnosed with recurrent endometrial hyperplastic process. In the uterus, the locus identified a thickening of the M-echo for 3 cm in the region of the middle third of the uterus, the locus had a heterogeneous structure with fibrosis areas along the periphery. This is determined the indications for the hystercopy examination. During hysteroscopy, it was

Table 2

Dynamics of ultrasound – signs in the postoperative period in women of group I

US- signs	The term of observation					
	7 days	1 month	3 months	6 months	1 year	2 year
M-echo, n (%)		Linear, 25 (100)	Linear, 25 (100)	Linear, 25 (100)	Linear, 25 (100)	Linear, 24 (96)
Recurrence or incomplete effect, n (%)	-	-	-	-	-	n=1 4.0%
Synechiae	-	-	+	+	+	+
The content of the uterine cavity	Liquid or heteroge-neous	Liquid or absent	Liquid or absent	absent	absent	absent
The width of the uterine cavity	0.5–1.8 cm	-	-	-	-	-

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Table 3

Dynamics of ultrasound - signs in the postoperative period in women of group II

US- signs	The term of observation					
	7 days	1 month	3 months	6 months	1 year	2 year
M-echo, mm		Linear, 20 (100)	Linear, 20 (100)	Linear, 19 (95)	Linear, 17 (85)	Linear, 17 (85)
Recurrence or incomplete effect, n (%)	-	-	-	n=1 5%	n=3 15.0%	n=3 15.0%
Synechiae	-	-	+	+	+	+
The content of the uterine cavity	Liquid or heteroge-neous	Liquid or absent	absent	absent	absent	absent
The width of the uterine cavity	0.4–0.6 cm	-	-	-	-	-

established that in the area of the internal os, there are loci of fibrosis and synechiae, after separation of which a portion of the hyperplastic endometrium was found. According to the results of histological examination, a glandular polyp of the endometrium was established. After re-resection in this case, there was no recurrence of the hyperplastic process. One year after radio-wave ablation, the presence of 2 recurrences of the endometrial hyperplastic process was established.

The first observation is that the patient in the uterus cavity was diagnosed with a locus M-echo thickening of 1.4×0.6 cm in size with areas of fibrosis around the periphery in the left tubular angle. During hysteroresectoscopy, in the uterine cavity, multiple synechiae were installed along the side walls, in the area of the right uterine angle a single endometrial polyp was determined. Histologically, a polyp is defined as fibro-glandular and upon further observation of a relapse of the hyperplastic process was not observed. Also, in 1 (5.0%) case, a locus was found to have a M-echo thickening measuring 1.1×0.8 cm with areas of fibrosis around the periphery in the area of the isthmus of the uterus. A hysteroscopic study showed the presence of a glandular polyp of the endometrium of 1.0×1.0 cm in multiple Synechiae in the area of the isthmus of the uterus, after resection of a recurrence was not observed.

It should be noted that all the findings of the recurrence of endometrial hyperplastic processes in both the first and second groups had a menopause period of 1.5–2.5 years, which indicates the need for follow-up monitoring of this category of patients after endometrial ablation.

Thus, an analysis of the effectiveness of various endometrial ablation techniques showed that the overall effectiveness of hysteroscopic monopolar ablation of non-atypical forms of HPE in women of postmenopausal age was 96%, the radio-wave ablation efficiency of the endometrium in this category of patients was 85%, respectively.

CONCLUSIONS

1. It is advisable to recommend endometrial ablation to patients with non-atypical forms of postmenopausal endometrial hyperplasia as an alternative to hormonal treatment or hysterectomy.

2. The efficiency of radio-wave ablation of the endometrium with non-atypical forms of endometrial hyperplasia is 85.0%. The effectiveness of monopolar hysteroscopic endometrial ablation in women with non-atypical forms of endometrial hyperplasia is 96.0%.

3. After ablation of the endometrium, clinical examination is advisable for two years. The method of choice for follow-up monitoring of the state of the endometrium of the uterus in women after ablation of the endometrium is transvaginal ultrasound, which is performed after 1, 3, 6, 12 and 24 months of observation.

4. In the case of recurrence of the endometrial hyperplastic process (bleeding, thickening of the M-echo according to ultrasound data), hysteroscopy is shown with mandatory histopathological studies and verification of the diagnosis.

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