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CLINICAL AND DIAGNOSTIC FEATURES OF ENDOMETRIAL HYPERPLASTIC PROCESSES IN POSTMENOPAUSAL WOMEN

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The study included data from 65 patients with endometrial hyperplasia in the postmenopausal period, of which 56 (86.2 %) had spotting, 32 (49.2 %) had sleep disorders, 29 (44.6 %) had emotional lability, 21 (32.3 %) had dysuric phenomena, 20 (30.8 %) had pain of varying intensity, 15 (23.1 %) had rapid fatigue, and 7 (10.0 %) had bleeding. Studies have found that 85.5 % of women had a history of high birth rates, of which 100 % of women had artificial abortions. The frequency of infertility in this group of patients was 5.2 %. 12 (18.5 %) patients had episodes of recurrent endometrial hyperplasia in the reproductive period. The data of the transvaginal echography showed that the most specific echographic indicator in postmenopausal endometrial hyperplasia is an increase in the thickness of the endometrium, ranging from 14.1±1.6 mm in patients with atypical endometrial hyperplasia to 21.3±4.8 in patients with diffuse endometrial hyperplasia. The study of the parameters of CA 125 revealed its significant fluctuations, which proved the lack of diagnostic significance in this pathology.

Key words: postmenopausal period, endometrial pathology, endometrial polyp, atypical endometrial hyperplasia, body mass index, infertility, transvaginal echography.

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КЛІНІКО-ДІАГНОСТИЧНІ ОСОБЛИВОСТІ ГІПЕРПЛАСТИЧНИХ ПРОЦЕСІВ ЕНДОМЕТРІЮ У ЖІНОК У ПОСТМЕНОПАУЗІ

Дослідження включало вивчення даних 65 хворих з гіперплазією ендометрія у постменопаузальному періоді, з яких у 56 (86,2 %) відзначалися кров'янисті виділення, у 32 (49,2 %) – порушення сну, у 29 (44,6 %) емоційна лабільність, у 21 (32,3 %) дизуричні явища, у 20 (30,8 %) наявність болів різної інтенсивності, у 15 (23,1 %) швидка стомлюваність, у 7 (10,0 %) кровотеча. Дослідження виявили, що у 85,5 % жінок в анамнезі відзначалися висока частота пологів, з них у 100 % жінок відзначалися штучні аборти. Частота безпліддя у даної групи хворих склала 5,2 %. У 12 (18,5 %) хворих в репродуктивному періоді відзначалися епізоди рецидивуючої гіперплазії ендометрія. Дані ТВУ показали, що найбільш специфічним ехографічним показником за гіперплазією ендометрія в постменопаузальному періоді є збільшення товщини ендометрія, що коливалася від 14,1±1,6 мм у хворих з атиповою гіперплазією ендометрія до 21,3±4,8 у хворих з дифузною гіперплазією ендометрія. Вивчення показників СА 125 виявило значні його коливання, що довело відсутність діагностичної значущості за даної патології.

Ключові слова: постменопауза, патологія ендометрія, поліп ендометрія, атипова гіперплазія ендометрія, індекс маси тіла, безпліддя, трансвагінальна ехографія.

The work is a fragment of a doctoral dissertation: "Pathogenetic mechanisms, clinic and modern methods of diagnosis of tumors of the reproductive organs in the postmenopausal period".

Peri- and postmenopausal periods are accompanied by a deficiency of estrogens and a decrease in the frequency of estrogen–dependent conditions. However, in the menopausal period, the probability of endometrial hyperplastic processes is high. The causes of endometrial hyperplasia (EH) are the presence of relative hyperestrogenism against the background of progesterone deficiency and the presence of absolute hyperestrogenism against the background of increased estrogen synthesis [3, 13].

In the pathogenesis of tumors of the reproductive organs, the main role is assigned to an increase in the proliferative activity of cells. A universal marker of proliferative processes is the determination of the KI67 protein in immunohistochemical studies. The presence of insulin resistance contributes to increased endometrial proliferation due to the activation of growth factors. Studies of insulin resistance indices allowed us to establish increased values of the NOMA indices (Nomeostasis Model Assessment) in patients with endometrial polyps. The authors found that the proliferative activity of endometrial polyps in the postmenopausal period is associated with an increase in the level of glucose, glucolized hemoglobin, and insulin, as well as an increase in insulin resistance indices. [7, 9, 15]

Endometrial hyperplasia is a risk factor for progression to endometrial carcinoma and is determined by the characteristics of cytological examination. Before the development of carcinoma in 2 % of women, endometrial hyperplasia progresses to atypical hyperplasia. In women with both simple and complex endometrial hyperplasia in the postmenopausal period, the probability of carcinoma increases to 23 %. Thus, 29 % of women with endometrial carcinoma were initially diagnosed with complex atypical hyperplasia [1, 10–12].

The study of the relationship between the influences of the duration of the postmenopausal period on the frequency of endometrial hyperplastic processes allowed us to establish that the probability of developing glandular and glandular-cystic endometrial hyperplasia is 54.97 and 2.91 %, respectively. It is

known that glandular endometrial hyperplasia refers to the first pathogenetic variant of endometrial hyperplastic processes and reflects the severity of hyperestrogenism and disorders of fat and carbohydrate metabolism, determined in 60–70 % of patients. The second pathogenetic variant of hyperplastic processes in the postmenopausal period includes a combination of ovarian stroma fibrosis and endometrial atrophy, the occurrence of polyps, atypical hyperplasia and endometrial cancer. The frequency of this pathogenetic variant is observed in 30–40 % of patients. [5, 6, 7]

Accurate clinical assessment of endometrial hyperplastic processes is currently difficult due to the use of different classification systems and the lack of differential diagnosis of endometrial pathologies, which affects the correct management of patients. Of particular concern is the fact that proliferative endometrial diseases can simultaneously coexist with each other and other tumors of the reproductive organs, including endometrial cancer. Thus, in 23.8 % of cases, diffuse endometrial hyperplasia is combined with endometrial polyp, and in patients with endometrial hyperplasia with atypia, in 42 % of cases, endometrial carcinoma is detected during histological examination of the macropreparation. [2, 8, 14]

Taking into account the relevance of this problem, the purpose and objectives of the study were determined.

The purpose of the study was to study the clinical and diagnostic features, as well as risk factors for the development of endometrial hyperplastic processes in postmenopausal women.

Materials and methods. Out of 306 patients with various neoplasms of the reproductive system in the postmenopausal period included in the study and treated at the National Cancer Center of the Republic of Azerbaijan, 65 (21.2 %) had endometrial hyperplastic processes.

Based on the clinical, functional and morphological methods of the study, it was found that 34 (11.1 %) patients were diagnosed with diffuse hyperplasia, 15 (4.9 %) with atypical hyperplasia, and 16 (5.2 %) patients with endometrial polyp. The average age of the patients was 58.9±0.9 (43–73) years. The average weight of patients with endometrial hyperplastic processes was 81.6±1.8 (52–122) kg, height 160±0.8 (148–178). The body mass index was in the range of 31.9±0.8 (19–49) kg/m^2, which allowed us to establish that obesity of varying severity, prevailed in patients with EHP.

The duration of the postmenopausal period in patients was within 9.8±0.4 years.

This study included conducting a clinical examination of patients, determining the severity of menopausal syndrome on the Kupperman scale. All patients underwent transvaginal ultrasound examination of the genitals, while evaluating the echographic parameters of the uterus, in particular the anteroposterior size, length, width, and determination of the length, width, and thickness of the ovaries. According to ultrasound, the size of the tumor was determined, and the thickness of the endometrium was measured. Also, the patients included in the study, according to the indications, underwent CT and MRI studies.

To study the information content of hormone indicators in women with tumors of the reproductive system, the parameters of FSH, LH, estradiol, estrone, DHEA-C, progesterone, testosterone and prolactin in the blood serum were determined. Hormonal studies were carried out by the method of enzyme immunoassay on the device “Cobas E 411” of the company Roche. All patients were determined by the indicators of the cancer marker CA-125.

The obtained quantitative and qualitative data were subjected to statistical processing by special methods of medical statistics, taking into account modern requirements. Methods of variational, correlation, variance, discriminant, and ROC analyses were used. To analyze the obtained quantitative digital data, the methods of variation statistics are applied. The average values of the obtained samples (M), their standard deviations (s), standard errors (m), 95 % confidence intervals (95 % CI), minimum (min) and maximum (max) values of the series were calculated. To estimate the difference between the variation series, the parametric Student’s t–test was previously used.

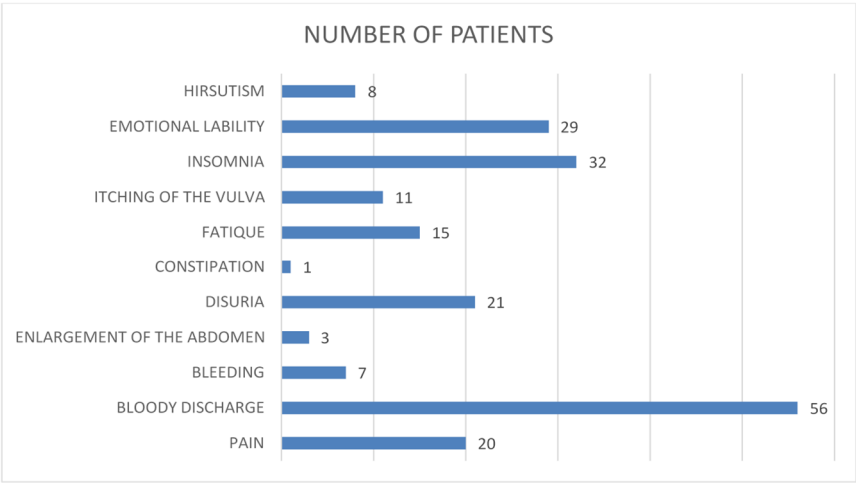

Fig.1. Frequency of clinical manifestations in patients with endometrial hyperplastic processes in the postmenopausal period

Results of the study and their discussion. The frequency of complaints in patients with endometrial hyperplastic processes is shown in fig. 1.

As can be seen from fig.1, 56 (86.2 %) people out of 65 patients with EHP in the postmenopausal period, had spotting. 32 (49.2 %) patients had sleep disorders, 29 (44.6 %) had emotional lability, 21 (32.3 %) had dysuric phenomena, 20 (30.8 %) had pain of varying intensity, 15 (23.1 %) had rapid fatigue, 11 (17.0 %) had itching and dryness of the external genitals, and 7 (10.0 %) had bleeding. In isolated cases, there was an increase in the volume of the abdomen and an impairment of the defecation act.

The study of menstrual function in patients with EHP revealed the presence of menarche in 13.0±0.2 (11–18) years. At the same time, 60 (92.3 %) of 65 patients had a regular menstrual cycle, 5 (7.7 %) patients had menstrual disorders in the form of oligo – and opsomenorrhea.

Studies of generative function revealed that 3 (5.2 %) of 58 patients had a history of infertility (7 patients had no sexual life). Of the 55 (94.8 %) patients, 34 (62 %) had 4 or more pregnancies, 9 (16.4 %) had 3 pregnancies, and 12 (21.8 %) had 2 pregnancies.

The study of the number of births in patients with endometrial hyperplastic processes revealed that 38 (14.5 %) patients had no history of childbirth, 18 (32.7 %) patients had 2 births, 15 (27.3 %) had 3 births, and 14 (25.5 %) patients had 1 birth.

The study of the number of abortions revealed that 21 (38.2 %) patients had a history of 4 or more abortions. 34 (61.8 %) patients had 2 artificial abortions.

It was found that out of 65 patients with EHP, 35 (53.8 %) had hypertension, 28 (43 %) had coronary heart disease, 28 (43 %) had diabetes, 13 (20 %) had chronic gastritis, and 11 (16.9 %) had neuropsychiatric disorders.

The study of the frequency of gynecological operations in patients with EHP allowed us to establish the presence of conservative myomectomy in 3 (4.6 %), tubectomy for tubal pregnancy in 1 (1.5 %) patient and cystectomy in 4 (62 %) patients. It should be noted that out of 65 patients with EHP, 12 (18.5 %) had episodes of recurrent endometrial hyperplasia in the reproductive period, which required curettage of the uterine cavity for diagnostic and therapeutic purposes. In the future, this group of patients underwent hormonal treatment.

The study of the severity of menopausal syndrome in patients with EHP in the postmenopausal period allowed us to establish its absence in 12 (18.5 %). In 53 (81.5 %), different degrees of menopausal syndrome severity were determined, while in 16 (24.6 %) mild, in 24 (36.9 %) moderate, and in 13 (20 %) severe menopausal syndrome severity.

In all the patients included in the study, the features of changes in the parameters of hormones, biochemical parameters and the cancer marker CA125 were studied. The results of studies of the levels of hormones of the hypothalamic–pituitary–ovarian system are presented in table 1.

Table 1

Indices of hormone levels in patients with EHP in the postmenopausal period

Indices	Patients with endometrial EHP	Women with uncomplicated postmenopausal period	p
FSH, mIU/ml	40.3±4.3 (3.65–82.9)	54.24±2.4	<0.05
LH, mIU/ml	24.1±2.6 (4.44–49)	21.92±1.92	>0.05
LH / FSH	0.6±0.02 (0.23–1.98)	2.47±0.03	<0.05
Prl, ng/ml	802.9±91.7 (427–2229)	116.86±3.95	<0.05
DHEA–C, pg/ml	121.6±21.6 (15.7–54.6)	1.3±0.03	<0.05
E1, ng/ml	99.3±3.42 (40.2–200.9)	9.5±0.52	<0.05
E_2, pg/ml	16.5±3.3 (0.4–69.3)	40.4±2.1	<0.05
E_3, pg/ml	0.07±0.002 (0.06–0.08)	–	–
P, ng/ml	0.7±0.4 (0.04–10.01)	0.54±0.09	<0.05
$T_{General}$, ng/ml	0.2±0.01 (0.02–0.64)	1.81±0.005	<0.05

As can be seen from table 1, in postmenopausal patients with EHP, there is a significant decrease in the level of FSH, the ratio of LH/FSH, estradiol, testosterone, with significantly high levels of Prl, DHEA-C and estrone.

The study of the level of the cancer marker CA–125 revealed its increase to 51.9±13.2 (17–262) mIU/ml.

The obtained indicator reflects significant fluctuations in CA-125 in postmenopausal EHP. This suggests that in postmenopausal EHP, the change in the level of CA-125 in this pathology has no diagnostic significance and requires further implementation of a complex of instrumental diagnostic studies.

The results of echographic examination of the uterus and ovaries in patients with EHP in the postmenopausal period are presented in table 2.

As can be seen from the table, in postmenopausal patients with EHP, there is a significant increase in the size of the uterus and ovaries. At the same time, there was a significant increase in the thickness of

the endometrium, which is the basis for a morphological study of the endometrial scraping to confirm the diagnosis. There is also an increase in the size of the ovaries, which is non–specific for women with a long postmenopausal period (fig. 2).

Table 2

Indices of echographic studies of the uterus and ovaries in patients with postmenopausal EHP

Echographic parameters	Diffuse endometrial hyperplasia	Atypical endometrial hyperplasia	Endometrial polyp	Uncomplicated course of the postmenopausal period	p
	1	2	3	4	
Uterus:					
– length, mm	60.4±4.4 (30–150)	57.3±3.7 (41–90.4)	58.2±3.7 (35–77)	44.44±0.9 (25–58)	$P_{1-4}<0.05$;$P_{2-4}<0.05$;$P_{3-4}<0.05$
– width, mm	49.2±3.5 (21–109)	48.4±3.5 (33–81)	47.7±4.1 (24–70)	40.66±0.08 (35–45)	$P_{1-4}<0.05$;$P_{2-4}<0.05$;$P_{3-4}>0.05$
– front–rear size	52.8±3.5 (23–105)	45.6±4.4 (32–87)	59.8±4.0 (38–77)	27.76±0.02 (18–32)	$P<0.05$
– endometrial thickness, mm	21.3±4.8 (3.8–176)	14.1±1.6 (6–28)	16.5±1.7 (10–33)	2.2±0.05 (0.6–1.4)	$P<0.05$
Right ovary:					
– length, mm	38.4±8.2 (13–97)	43.3±6.6 (24–93)	25.8±5.3 (16–41)	18.82±0.09 (10–20)	$P_{1-4}<0.05$;$P_{2-4}<0.05$;$P_{3-4}>0.05$
– width, mm	35.1±7.6 (12–83)	32.3±2.2 (15–68)	17.0±2.9 (11–24)	11.1±0.04 (8–14)	$P_{1-4}<0.05$;$P_{2-4}<0.05$;$P_{3-4}>0.05$
– thickness, mm	24.5±2.1 (11–24)	26.4±2.4 (13–56)	19.3±2.4 (14–25)	15.9±0.07 (12–20)	$P_{1-4}<0.05$;$P_{2-4}<0.05$;$P_{3-4}>0.05$
Left ovary:					
– length, mm	36.1±7.7 (12–85)	33.2±5.6 (11–72)	26.1±4.9 (15–38)	19.34±0.07 (10–25)	$P_{1-4}<0.05$;$P_{2-4}<0.05$;$P_{3-4}>0.05$
– width, mm	32.3±5.8 (10–76)	31.8±2.4 (12–58)	16.9±3.4 (12–24)	10.74±0.05 (8–14)	$P_{1-4}<0.05$;$P_{2-4}<0.05$;$P_{3-4}>0.05$
– thickness, mm	25.1±3.0 (12–26)	26.4±1.9 (11–29)	18.1±3.1 (13–24)	14.59±0.08 (12–18)	$P_{1-4}<0.05$;$P_{2-4}<0.05$;$P_{3-4}>0.05$

Morphological studies revealed the presence of atypical endometrial hyperplasia (AGE) in 15 (23 %) of 65 patients, diffuse hyperplasia in 34 (52.3 %), and endometrial polyp in 16 (24.6 %) patients.

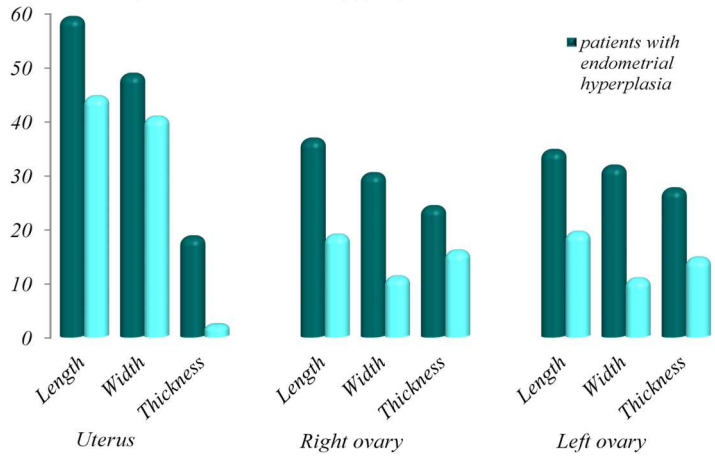

Fig.2. Ultrasound parameters of the uterus and ovaries in postmenopausal patients with EHP

Thus, with hyperplastic processes of the endometrium in patients in the postmenopausal period, there is a significant increase in the size of the uterus and ovaries. The most specific echographic indicator for EHP in the postmenopausal period is an increase in the thickness of the endometrium. The thickness of the endometrium in EHP ranged from 14.1±1.6 mm in patients with atypical endometrial hyperplasia to 21.3±4.8 in patients with diffuse endometrial hyperplasia, which is the basis for a morphological study.

At the same time, echographic examination does not allow differentiating endometrial hyperplastic processes from endometrial cancer, which reduces the diagnostic value of the method and requires immediate diagnostic scraping and endometrial biopsy with further histological examination of the collected material.

According to recent studies, it has been determined that relative and absolute hyperestrogeny plays a significant role in the development of endometrial hyperplastic processes in the postmenopausal period. Hormonal restructuring of the body of women against the background of ovarian hypofunction is a predisposing factor to the development of endometrial cancer, the clinical manifestations of which are often the presence of bloody discharge of varying intensity. It should be noted that in postmenopause, the presence of diffuse and focal changes in the endometrium is characterized by an asymptomatic course. [2, 10, 13].

It was found that the frequency of diffuse endometrial hyperplasia according to radiological research methods in the absence of clinical manifestations is 27.6 %. The frequency of asymptomatic endometrial polyps is on average 70.3 %. The frequency of adenocarcinoma is within 1 %, asymptomatic fibroids 0.5 %. The main clinical manifestation of the pathology of the uterus and endometrium in the postmenopausal period is bloody discharge, the frequency of which is 28.6 %, while against the background of bloody discharge of varying intensity, diffuse endometrial hyperplasia is diagnosed in 28.6 %, and endometrial polyp in 42.8 % of cases. [4, 6].

Currently, the diagnosis of EHP is carried out on the basis of subjective complaints, ultrasound data and mandatory histological verification of endometrial scraping. At the same time, routine use of computed tomography and magnetic resonance imaging is not recommended due to insufficient data on their positive role in the diagnosis of proliferative changes in the endometrium. The lack of specific clinical manifestations for each of the nosological units of endometrial pathology also complicates the diagnosis.

Questions about the significance and effectiveness of transvaginal ultrasound in the random determination of endometrial thickness of more than 4 mm in asymptomatic postmenopausal women also remain controversial. According to a number of studies, it was found that in women with M–echo more than 4 mm without postmenopausal bleeding, according to the results of histological examination of the endometrial biopsy, endometrial polyp was determined in 24.7 % of cases and in 4.9 % of cases atypical hyperplasia and endometrial cancer. [2, 13]

Conclusions

In this study, the risk factors for the development of endometrial hyperplastic processes in the postmenopausal period were studied. Studies have found that 85.5 % of women had a history of high birth rates, of which 100 % of women had artificial abortions. The frequency of infertility in this group of patients was 5.2 %. In 14.5 % of patients with the presence of pregnancies, there was no delivery. It is important to have a history of recurrent endometrial hyperplasia in the reproductive period in patients with postmenopausal hyperplastic processes, which is a consequence of hormonal imbalance. This pathology of the reproductive period was observed in the anamnesis of every fifth patient from this group.

In the postmenopausal period, hyperplasia was manifested in 86.2 % of cases by the presence of bloody discharge, in 10 % of cases by the presence of bleeding. Based on the clinical, functional and morphological methods of the study, it was found that 52.3 % of women had a predominant presence of diffuse endometrial hyperplasia. The presence of atypical hyperplasia (23.0 %) and focal endometrial hyperplasia (24.6 %) was observed with almost the same frequency.

In our study, the BMI in patients with endometrial hyperplastic processes in the postmenopausal period was 31.9±0.8 kg/m^2.

Thus, the high risk factors for endometrial hyperplastic processes in the postmenopausal period are the presence of recurrent endometrial hyperplasia in the reproductive period, overweight and obesity of various degrees of severity, as well as the presence of a large number of artificial abortions in the anamnesis.

References

1. Amiraslanov AT, Safarova SI. Faktory riska i prognosticheskie pokazateli atipicheskoy giperplazii endometriya. Vestnik sovremennoy klinicheskoy meditsiny, 2019;12 (2) :7–11. https://doi.org/10.20969/VSKM.2019.12(2).7–11 [in Russian]

2. Gabidullina RI, Smirnova GA, Nuhbala FR. Giperplasticheskie protsessy endometriya: sovremennaya taktika vedeniya patsientok. Consilium Medicum. Moskva 2019; 21 (6): 53–58 https://doi.org/10.26442/20795696.2019.6.190472 [in Russian]

3. Kuznetsova IV, Mychka VB, Kirillova MJu. Sovremennaya kombinirovannaya gormonalnaya terapiya u zhenshhin v ranney postmenopauze. Kardiovaskulyarnaya terapiya i profilaktika 2012; 11(4):42–51. https://doi/org/10.15829/1728–8800–2012–4–42–51 [in Russian]

4. Pushkarev VA, Mustafina GT, Husnutdinov ShM. Zhelezistaya giperplaziya endometriya. Diagnostika, klinika, lechenie. Kreativnaya khirurgiya i onkologiya. 2013; (4):23–7 [in Russian]

5.Rymashevskiy AN, Vorobyev SV, Andryushhenko JuA. Osobennosti razvitiya polipov endometriya u bolnykh s ozhireniem v postmenopauze. Vestnik novykh meditsinskikh tekhnologiy, 2011; XVIII (4): 109–111. [in Russian]

6. Chestnova GP, Kuljushina EA, Abashin VG, Efimenko NA. Osobennosti diagnostiki giperplasticheskikh protsessov v endometrii u zhenshhin v period dlitelnoy postmenopauzy. Klinicheskaya Meditsina, 2013; 9: 46–47. [in Russian]

7. Aune D, Navarro Rosenblatt D.A. Antropometric factors and endometrial cancer risk: A systematic rewiew and meta–analysis of prospective studies. Ann.Oncol., 2015; 26 (8):1635–1648.

8. Brinton L, Felix A. Cancer progress and priorities: uterine cancer. Cancer Epidemiol Biomarkers Prev. 2018; 27(9): 985–994. https://doi.org/10.1158/1055–9965. EPI–18–0264.

9. Crosbie E, Roberts C, Qian W, Swart A, Kitchener H. Body mass index does not influence post–treatment survival in early stage endometrial cancer: results from eh MRC ASTEC trial. Eur.J.Cancer., 2012; 48: 853–864.

10. Ghoubara A, Emovon E, Sundar S, Ewies A. Thickened endometrium in asymptomatic postmenopausal women – determining an optimum threshold for prediction of atypical hyperplasia and cancer. J Obstet Gynaecol. 2018; 38 (8): 1146–9.
11. Pennant ME, Mehta R, Moody P, Hackett G, Prentice A. Premenopausal abnormal uterine bleeding and risk of endometrial cancer. BJOG. 2017; 124(3):404–11. https://doi.org/:10.1111/1471–0528.14385
12. Van Hanegem N, Breijer MC, Khan KS. Diagnostic evaluation of the endometrium in postmenopausal bleeding: An evidence–based approach. Maturitas. 2011;68(2):155–64. https://doi.org/:10.1016/j.maturitas.2010.11.010.
13. Wang Y, Nisenblat V, Tao L. Combined estrogen–progestin pill is a safe and effective option for endometrial hyperplasia without atypia: a three–year single center experience. J Gynecol Oncol 2019 30(3): e49 https://doi.org/10.3802/jgo.2019.30.e49
14. Werner HMJ, Berg, Wik E, Birkeland E, Krakstad C, Kusonmano K, Petersen K, Kalland KH, Oyan AM, Akslen LA et al. ARID1A loss is prevalent in endometrial hyperplasia with atypia and low–grade endometrioid carcinomas. Mod Pathol 2012; 26:428–434
15. Wise M.R, Jordan V, Lagaset A. Obesity and endometrial hyperplasia and cancer in premenopausal women: A systematic review. Am.J.Obstet.Gynecol. 2016; .214(6): 689 https://doi.org/10.1016/j.ajog.2016.01.175.

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FREQUENCY OF TOOTH RETENTION IN AZERBAIJANI RESIDENTS

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7172 patients who applied for orthodontic care were examined, of which 2669 (37.21 %) were male and 4503 (62.79 %) were female. 899 impacted teeth were identified, which was 12.53±0.39 % of cases. Depending on the ratio of the first permanent molars according to Angle's classification: out of 3545 patients with class I, impaction of permanent teeth was observed in 494 patients (13.94±0.58 %); from 2710 patients with class II impacted permanent teeth were observed in 304 patients (11.22±0.4 %); from 917 patients with class III impacted permanent teeth were observed in 101 patients (of 11.01±1.03 %). In patients with vertical malocclusions identified 81 impacted tooth 891 patients with open bite (9.09 ±0.96 %), and 181 of the impacted tooth (11.11±0.78 %) in 1629 patients with a deep bite. Timely detection of tooth impaction helps to prevent the development of complications and secondary deformities of the dentition.

Keywords: central incisors of the upper jaw, impaction, eruption delay, Angle's classification

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ЧАСТОТА РЕТЕНЦІЇ ЗУБІВ У НАСЕЛЕННЯ АЗЕРБАЙДЖАНУ

Обстежено 7172 пацієнтів, які звернулися за ортодонтичною допомогою, з них 2669 осіб (37.21 %) чоловічої і 4503 особи (62.79 %) жіночої статі. Виявлено 899 ретенованих зубів, що склало 12.53±0.39 % випадків. Залежно від співвідношення перших постійних молярів по Енгл: з 3545 пацієнтів з класом I ретенція постійних зубів відзначалася у 494 пацієнтів (13.94±0.58 %); з 2710 пацієнтів з класом II ретенція постійних зубів відзначалася у 304 пацієнтів (11.22±0.4 %); з 917 пацієнтів з класом III ретенція постійних зубів відзначалася у 101 пацієнта (11.01±1.03 %). У пацієнтів з вертикальними аномаліями прикусу виявлено 81 ретенованией зуб у 891 пацієнтів з відкритим прикусом (9.09±0.96 %) і 181 ретенований зуб (11.11±0.78 %) у 1 629 пацієнтів з глибоким прикусом. Своєчасне виявлення ретенції зубів сприяє запобіганню розвитку ускладнень і вторинних деформацій зубних рядів.

Ключові слова: центральні різці верхньої щелепи, ретенція, затримка прорізування, класифікація Енгля

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Violation of the eruption of permanent teeth – retention, a common dental anomaly. Many studies in the field of interdisciplinary dentistry are devoted to the diagnosis and treatment of dental retention. However, despite this, there is no single protocol for the treatment and prevention of such an anomaly.

Under physiological conditions, a tooth erupts when half or three quarters of the final root's length is formed. If the teeth remain in the jaws after a period of physiological eruption, they are considered retentive [1, 5, 6, 8]. According to the literature, the most common among the retinated teeth are the third molars, canines, premolars, and then incisors. Statistical data on the prevalence of retentive teeth are not identical, and their frequency varies depending on race [2, 10, 14].

The causes of tooth retention can be supercomplete teeth (SCT), adentia, various injuries, ameloblastomas, odontomas, cysts, caries damage to neighboring teeth, early removal of temporary teeth, incorrect position of the rudiments of the teeth, the presence of a dense mucous membrane on the path of teething [3, 8, 11]. Tooth retention is also found in patients with various hereditary diseases and Scheithauer-Marie-Sainton, Down, Gorlin–Goltz syndromes, and is often combined with the presence of SCT [12].