

# Results of Studying the Structure of Endometrial Pathology and Myometry in Women with Abnormal Uterine Bleeding during Perimenopause

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**Abstract** Purpose study of the structure of the endometrium in women with abnormal uterine bleeding during perimenopause. We analyzed the case histories of 125 patients with abnormal uterine bleeding who received inpatient treatment in the gynecological department of the 1st clinic of SamMI from January 2019 to May 2020. According to the histological study of group I, 32 (37.6 ± 5.2%) were diagnosed with glandular hyperplasia of the endometrium, 3 (3.5 ± 2.0%) of patients, glandular hyperplasia of the endometrium was combined with a submucous myomatous node, in 9 (10.6 ± 3.3%) - glandular-cystic hyperplasia of the endometrium, endometrial polyps - in 41 (48.2 ± 5.4%) patients. According to the histological examination of group II scraping, 5 (19.2 ± 7.7%) were diagnosed with glandular hyperplasia of the endometrium, 2 (7.6 ± 5.2%) had glandular cystic hyperplasia, polyps were diagnosed in 10 (38.4 ± 9, 5%), 2 (7.6 ± 5.2%) patients with glandular hyperplasia of the endometrium revealed a submucous myomatous node, atypical endometrial hyperplasia in 6 (23.0 ± 8.2%) and endometrial cancer in 1 (3.8 ± 3.7%) patient. Thus, during histological examination of endometrial scraping in patients with abnormal uterine bleeding in the group with recurrent AMC, atypical endometrial hyperplasia was verified 6 (23.0 ± 8.2%) and endometrial cancer was detected in one patient, while patients of group I had atypical endometrial hyperplasia and no endometrial cancer was detected.

**Keywords** Coagulopathic, Oncological alertness, Precancer, Adenomyosis, Submucous myomatous, Endometrial glandular

## 1. Introduction

Abnormal uterine bleeding (AMB) is one of the most common reasons for visiting a gynecologist and performing intrauterine interventions. The term AMB covers severe uterine bleeding, which can be caused by anatomical pathology of the reproductive system and women with normal anatomy in whom AMK can be caused by ovulatory dysfunction, coagulopathic and iatrogenic causes [11,13]. Endometrial hyperplastic processes are a common pathology, the frequency of which increases towards the period of age-related hormonal changes in perimenopause. Endometrial hyperplastic processes in most cases are manifested by abnormal uterine bleeding [12].

The most frequent morphological substrate of abnormal uterine bleeding (AMB) during perimenopause in women is endometrial hyperplastic processes [2,5]. As you know, the causes of AMB are chronic anovulation, which is characteristic of this age period of life due to age-related

hormonal changes [5].

Endometrial hyperplasia (EH) is one of the main forms of pathological proliferative changes in the uterine mucosa, characterized by excessive proliferation of the predominantly glandular and, to a lesser extent, its stromal component. However, one should not forget about oncological alertness.

According to a number of authors, in 70% of cases of uterine cancer during perimenopause, hyperplastic processes of the endometrium precede, and in 30-79% of cases within 1-3 years, atypical endometrial hyperplasia turns into cancer [1,5].

So, in the studies of Barbieri R.L. et al. the risk of transformation of simple hyperplasia into atypical hyperplasia was about 10.5%, and into endometrial cancer - 2% [7,4].

Endometrial polyps, glandular and glandular-cystic hyperplasia of the endometrium refer to background processes and only atypical hyperplasia is a true endometrial precancer. Glandular hyperplasia during perimenopause in 0.4-1% of cases turn into atypical hyperplasia and endometrial cancer. Atypical hyperplasia turns into

endometrial cancer in 40% of cases [1]. Precancerous EH transforms into endometrial cancer in 10% of patients (according to different authors, from 2 to 50%) [8,9,10].

As you know, the gold standard for determining the background of AMK is morphological - the study of histological preparations of endometrial scrapings [3,9].

**The aim of our study** was to study the structure of the endometrium in women with abnormal uterine bleeding during the perimenopause.

## 2. Materials and Methods

We analyzed the case histories of 125 patients with abnormal uterine bleeding who received inpatient treatment in the gynecological department of the 1st clinic of SamMI from January 2019 to May 2020.

The age of women varied from 43 to 51 years, on average  $46.9 \pm 1.6$  years. According to generally accepted standards,

all patients underwent clinical and anamnesis examination, transvaginal ultrasound examination, and hysteroscopy.

As you know, uterine bleeding is a syndrome diagnosis, which can be caused by a large number of different diseases. In the period of per menopause, which is a critical period in terms of the occurrence of various neoplasm's, with abnormal uterine bleeding, along with ultrasound, a morphological examination of the uterine mucosa is mandatory.

## 3. Results

All patients with endometrial hypertrophy 111 ( $88.8 \pm 2.8\%$ ), we underwent a morphological examination of scrapings (Table 1). The exception was 14 ( $11.2 \pm 2.8\%$ ) in whom the ultrasound diagnosed the thickness of the endometrium from 1 to 4 mm.

**Table 1.** Histological structure of the endometrium in women with abnormal uterine bleeding during perimenopause

Endometrial structure	I group, n = 85	II group, n = 26	consolidated group, n = 111
Endometrial glandular hyperplasia	32(37,6±5,2%)	5(19,2±7,7%) *	37(33,3±4,5%)
Glandular hyperplasia of the endometrium and submucous myomatous node	3(3,5±2,0%)	2(7,6±5,2%)	5(4,5±1,9%)
Glandular cystic hyperplasia	9(10,6±3,3%)	2(7,6±5,2%)	11(9,9±2,8%)
Endometrial polyps	41(48,2±5,4%)	10(38,4±9,5%)	51(45,9±4,7%)
Atypical endometrial hyperplasia	-	6(23,0±8,2%)	6(5,4±2,1%)
Endometrial cancer	-	1(3,8±3,7%)	1(0,9±0,9%)

Note:

\* -p <0.05 reliability of differences between groups I and II

According to the histological study of group I, 32 ( $37.6 \pm 5.2\%$ ) were diagnosed with glandular hyperplasia of the endometrium, in 3 ( $3.5 \pm 2.0\%$ ) patients, glandular hyperplasia of the endometrium was combined with a submucous myomatous node, in 9 ( $10, 6 \pm 3.3\%$ ) - glandular-cystic hyperplasia of the endometrium, endometrial polyps - in 41 ( $48.2 \pm 5.4\%$ ) patients.

According to the histological examination of group II scraping, 5 ( $19.2 \pm 7.7\%$ ) were diagnosed with glandular hyperplasia of the endometrium, 2 ( $7.6 \pm 5.2\%$ ) had glandular cystic hyperplasia, polyps were diagnosed in 10 ( $38.4 \pm 9, 5\%$ ), in 2 ( $7.6 \pm 5.2\%$ ) patients on the background of glandular hyperplasia of the endometrium, a submucous myomatous node, atypical endometrial hyperplasia in 6 ( $23.0 \pm 8.2\%$ ) and endometrial cancer in 1 ( $3, 8 \pm 3.7\%$ ) patient.

Thus, during histological examination of endometrial scraping in patients with abnormal uterine bleeding in the group with recurrent AMC, atypical endometrial hyperplasia was verified 6 ( $23.0 \pm 8.2\%$ ), and in one patient, endometrial cancer was detected, while in patients of group I, atypical hyperplasia endometrial and endometrial cancer were not identified.

Analysis of the results of endometrial histology, depending on the data of the ultrasound structure of the myometrium in patients with AMB, showed a combination

of glandular hyperplasia of the endometrium (GHPE) with endometrial myoma in 9 ( $7.2 \pm 0.6\%$ ), with adenomyosis in 9 ( $7.2 \pm 0.6\%$ ) %, a combination with adenomyosis and myoma 4 ( $3.2 \pm 1.6\%$ ), VHGE without myometrial pathology 15 ( $12.0 \pm 2.9\%$ ) and in 5 ( $4.0 \pm 1.8\%$ ) patients with VHGE combined with a submucous myomatous node.

Glandular cystic hyperplasia of the endometrium (GLCHP) was combined with myometrial pathologies in 11 ( $8.8 \pm 2.5\%$ ) cases, of which 6 with uterine myoma ( $4.8 \pm 1.9\%$ ), with adenomyosis in 2 ( $1,6 \pm 1.9\%$ ), combination with myoma and adenomyosis in 3 ( $2.4 \pm 1.4\%$ ) patients.

Endometrial polyps (PE) were combined with myometrial pathology in 34 ( $27.2 \pm 3.9$ ) patients, of whom 19 ( $15.2 \pm 3.2\%$ ) patients were associated with uterine myoma, in 13 ( $10.4 \pm 2, 7\%$ ) with adenomyosis, in 2 ( $1.6 \pm 1.9\%$ ) it was combined with uterine myoma and adenomyosis. Endometrial polyps without myometrial pathology were found in 17 ( $13.6 \pm 0.8\%$ ) cases.

Atypical endometrial hyperplasia (AGE) was combined with uterine myoma in 2 ( $1.6 \pm 1.9\%$ ) cases, in 4 ( $3.2 \pm 1.6\%$ ) patients, AGE was not combined with myometrial pathology.

In patients who did not undergo curettage (14 ( $11.2 \pm 2.8\%$ )), uterine myoma was found in 4 ( $3.2 \pm 1.6\%$ ) and adenomyosis in 10 ( $8.0 \pm 2.4\%$ ).

Thus, GHPE was detected in 15 ( $12.0 \pm 2.9\%$ ) patients without myometrial pathologies, PE was detected in 17 ( $13.6 \pm 0.8\%$ ) patients without myometrial pathology, AHE in 4 ( $3.2 \pm 1, 6\%$ ) of patients without myometrial pathology and in 1 ( $0.8 \pm 0.8\%$ ) patient with endometrial cancer, no myometrial pathology was detected by ultrasound data.

**Table 2.** Analysis of the results of endometrial histology depending on the data of the ultrasound structure of the myometrium in patients with abnormal uterine bleeding

Structure endometrium n = 125	myoma	adenomyosis	fibroids in combination with adenomyosis	without myometrial pathology	Total
myometrium structure n = 125					
Endometrial glandular hyperplasia	9( $7,2 \pm 0,6\%$ )	9( $7,2 \pm 0,6\%$ )	4( $3,2 \pm 1,6\%$ )	15( $12,0 \pm 2,9\%$ )	37( $25,6 \pm 8,4\%$ )
Glandular hyperplasia of the endometrium and submucous myomatous node	5( $4,0 \pm 1,8\%$ )	-	-	-	5( $4 \pm 1,8\%$ )
Glandular cystic hyperplasia	6( $4,8 \pm 1,9\%$ )	2( $1,6 \pm 1,9\%$ )	3( $2,4 \pm 1,4\%$ )	-	11( $8,8 \pm 2,5\%$ )
Endometrial polyps	19( $15,2 \pm 3,2\%$ )	13( $10,4 \pm 2,7\%$ )	2( $1,6 \pm 1,9\%$ )	17( $13,6 \pm 0,8\%$ )	51( $40,8 \pm 4,4\%$ )
Atypical endometrial hyperplasia	2( $1,6 \pm 1,9\%$ )	-	-	4( $3,2 \pm 1,6\%$ )	6( $4,8 \pm 1,9\%$ )
Endometrial cancer	-	-	-	1( $0,8 \pm 0,8\%$ )	1( $0,8 \pm 0,8\%$ )
Patients who have not undergone curettage	4( $3,2 \pm 1,6\%$ )	10( $8,0 \pm 2,4\%$ )			14( $11,2 \pm 2,8\%$ )
<b>Total</b>	45	34	9	37	125

The most informative method of examining women with AMC during perimenopause is diagnostic curettage of the uterine cavity, according to the conclusions of which a plan for the management of patients is developed.

## 4. Conclusions

1. Thus, during histological examination of endometrial scraping in patients with abnormal uterine bleeding in the group with recurrent AMC, atypical endometrial hyperplasia was verified 6 ( $23.0 \pm 8.2\%$ ) and endometrial cancer was detected in one patient, while patients of group I had atypical endometrial hyperplasia and no endometrial cancer was detected.

2. Thus, GHPE was detected in 15 ( $12.0 \pm 2.9\%$ ) patients without myometrial pathologies, PE was detected in 17 ( $13.6 \pm 0.8\%$ ) patients without myometrial pathology, AHE in 4 ( $3.2 \pm 1, 6\%$ ) of patients without myometrial pathology and in 1 ( $0.8 \pm 0.8\%$ ) patient with endometrial cancer, no myometrial pathology was detected by ultrasound data.

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