

## АКУШЕРСТВО ТА ГІНЕКОЛОГІЯ

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## MORPHOLOGICAL FEATURES OF UTERINE POLYPS IN FEMALES OF REPRODUCTIVE AGE

**Summary.** According to modern views based on evidence-based medicine, the concept of "poly-endometrium" is defined as a benign, exophytic nodophilic formation of the uterine mucus that consists of glands and stroma, predominantly fibrous, containing a "tangle" of thick-walled blood vessels.

**The aim of the study** – to learn the morphological features of tissues of polyps of the body of the uterus and endometrium with the establishment of the role of inflammatory factor in the pathogenesis of hyperproliferative changes in women of reproductive age.

**Materials and Methods.** The article presents the results of a survey of 62 patients of reproductive age with polyps in the body of the uterus. The presence of the glandular component in 79.03 % of cases, fibrotic polyps – 12.9 %, and micro-polyps – 8.06 % were determined, respectively. The combination of polyps with non-atypical endometrial hyperplasia was detected in 80 % of patients with micro-polypoid, in 63.6 % of women – with glandular-cystic polyps of the uterine body, in 44.4 % of the examined – with glandular-fibrous endometrial polyps and in 37.5 % of patients – with fibrous polyps. Immunohistochemically, CD138 expression was detected both in the tissues of the polyps of the uterus and adjacent endometrial tissues in 43.5 % of cases, which became a marker of the chronic endometritis in the part of the surveyed, which formed the basis of the pathogenetic approaches in the treatment of such a pathology. For processing data standard procedures using Microsoft Excel were used. The research was conducted in the Laboratory of Pathomorphology of the Department of O. Lukyanova Institute of Pediatrics, Obstetrics and Gynecology of the National Academy of Medical Sciences of Ukraine, head of the department – Corresponding Member of the National Academy of Medical Sciences of Ukraine, Professor T. Zadorozhna.

**Results and Discussion.** In clinical analysis of complaints of polyps of the body of the uterus, clinical manifestations in the form of menstrual cycle disturbance were 13 (20.97 %) patients, in 11 (17.74 %) patients there were no complaints about the desired pregnancy, at the same time as 38 (61.29 %) women were asked to carry out a preventive examination, which does not contradict the results of other researchers. During the morphological study, we established the following features of the polyps of the body of the uterus in women of reproductive age: the most frequently tested polyps of the body of the uterus, which had the glandular component – in 49 (79.03 %) cases, of which the glandular-cystic structure was found in 22 (35.48 %) of patients, the glandular-fibrous structure was in 27 (43.55 %) patients, approximately the same values were found in fibrous polyps of the body of the uterus – 8 (12.90 %) of women and micropolymers of endometrium – in 5 (8.06 %) cases respectively. We found that in all groups of patients with polyps in the body of the uterus, there were signs of non-atypical hyperplasia of the endometrium. It should be noted that, according to literature, endometrial polyps larger than 15 mm were associated with hyperplasia. The above data is an important indication that the unidirectional determination of the positive expression of the CD138 inflammatory marker, both in the tissue of the polyp of the uterus and in the endometrial tissue, indicates the unity of the inflammatory factor in the pathogenesis of hyperproliferative processes and proves the significant role of the inflammatory process in the development of its pathological conditions and justifies the necessity take into account this fact in approaches to the tactics of patient management.

**Conclusions.** The results of the conducted morphological and immunohistochemical research indicate that the basis of the formation of polyps of the body of the uterus is the inflammatory process, which is confirmed morphologically with the presence of chronic endometritis and a positive reaction to CD138. The study of pathogenetic mechanisms for the formation of endometrial pathology is a key factor in the development of methods for correction of these pathological processes, which thus allows to increase the efficiency of treatment and preserve reproductive health.

**Key words:** uterine polyps; endometrial hyperplasia; chronic endometritis; CD-138.

**INTRODUCTION** In accordance with the modern standards of evidence-based medicine, the definition of the endometrial polyp has been defined as the benign nodular exophytic growths within the uterine cavity, consisting of glands and various amounts of stroma, which is mainly fibrous, containing a "tangle" of thick-walled blood vessels [11].

The commonly accepted postulates regarding the etiopathogenetic aspects of this problem are as follows: 1) polyps are formed by local hyperplastic overgrowths on the surface of the endometrium and consist of endometrial glands and stroma; 2) the polypoid mass of architectural abnormality consists of cystically enlarged glands with fibrous stroma, through which thick-walled blood vessels pass; 3) uterine polyps may be related to hyperestrogenism, which may have its origins in the mechanism of localized hyperplasia of the endometrial basal layer and is secondarily susceptible to hormonal influences [1, 11–13].

Despite the low probability of malignant transformation of the uterine polyps, they should be removed when detected, as it makes it possible to establish a histological diagnosis with the purpose of studying their neoplastic potential as well as to develop a pathogenetically substantiated treatment regimen of abnormal uterine bleeding [3, 14].

The vast majority of authors tend to believe that in some cases on the modern level endometrial polyps may be distant metastases of diseases of the non-gynaecological area:

- metastatic spreading of lobular breast carcinoma to an endometrial polyp;
- endometrial tuberculosis diagnosed after the removal of a polyp with classical benign appearance;
- metastatic spreading of pulmonary carcinoma to the endometrial polyp [4–6].

The alternative idea is that most of the endometrial polyps remain, if not treated, only a small percentage of the uterine polyps can spontaneously regress [2]. However, there is a

gap in knowledge as for the rational approaches to treating patients with uterine polyps.

**The aim of the study** – to learn the morphological features of tissues of uterine polyps and endometrial tissue with the aim of establishing the role of inflammatory factor in the pathogenesis of hyperproliferative changes that occur in the endometrium in women of reproductive age.

**MATERIALS AND METHODS** Our study included 62 female patients of reproductive age ( $38.26 \pm 0.9$ ) on average, who at the outpatient stage echographically showed signs of local hyperproliferative pathology of endometrium. Using the hysteron-resectoscope, the removal of the endometrial polyp and the surrounding endometrial tissues was performed for a further morphological (picrofuchsin staining according to the van Gieson technique and hematoxylin-eosin staining) and immunohistochemical study of the received material (detection of plasmacytic cells with monoclonal antibodies to CD-138 markers of the inflammatory process). For the analysis we used the morphological classification of endometrial polyps, based on the correlation and structural features of the glandular and stromal component: glandular (glandular and cystic), glandular-fibrous and fibrous endometrial polyps (classification by Bokhman Y. B., 1989). [18]. In some cases we found the signs of endometrial micropolyps that were visualized as papillary structures less than 1 mm of size and, according to literature, they are most frequently associated with a chronic inflammatory process in the endometrium [7]. The evaluation of the results was carried out with the use of the Olympus BX51 research-level microscope (Japan). Standard procedures using Microsoft Excel were used to process the data. The research was conducted in the pathology laboratory of Institute of Pediatrics, Obstetrics and Gynecology named after Academician O.M. Lukyanova of the National Medical Sciences of Ukraine, the research director corresponding member of NAMS of Ukraine, Professor Zadorozhna T. D.

**RESULTS AND DISCUSSION** It should be noted that during the clinical analysis of complaints, 13 (20.97 %) examined patients had clinical manifestations in the form of the menstrual disorder, 11 (17.74 %) patients had complaints about the inability to get pregnant, while 38 (61.29 %) women asked to conduct a routine preventive examination, the fact that does not contradict the results of other researchers [15–17].

During the morphological research, we established the following characteristics of uterine polyps in the examined women of reproductive age. According to the data (Fig. 1.): mostly patients of reproductive age verified uterine polyps which had a glandular component i.e. 49 (79.03 %) cases, of which the glandular-cystic structure was detected in 22 (35.48 %) patients, the glandular-fibrous structure was found in 27 (43.55 %) patients, approximately equal numbers of women with fibrous polyps i.e. 8 (12.90 %) women, and with endometrial micropolyps i.e. 5 (8.06 %) cases respectively.

It should be noted separately that while comparing clinical manifestations of menstrual disorders in 13 (20.97 %) patients and the morphological structure of endometrial polyps, we did not find any signs of abnormal uterine discharge associated with specific morphological features of endometrial polyps.

The morphological analysis of the surrounding areas to a polyp of endometrial tissue was an important pathogenetic step, which revealed the features of its structure, as shown in Table 1.

Thus, we found that all groups of patients with uterine polyps showed the signs of non-atypical endometrial hyperplasia, which revealed an important fact of the presence of combined hyperproliferative pathology of endometrium in 14 (63.64 %) patients with glandular and cystic uterine polyps, 12 (44.44 %) women with glandular-fibrous endometrial polyps, 4 (80 %) patients had signs of micropolyposis, and

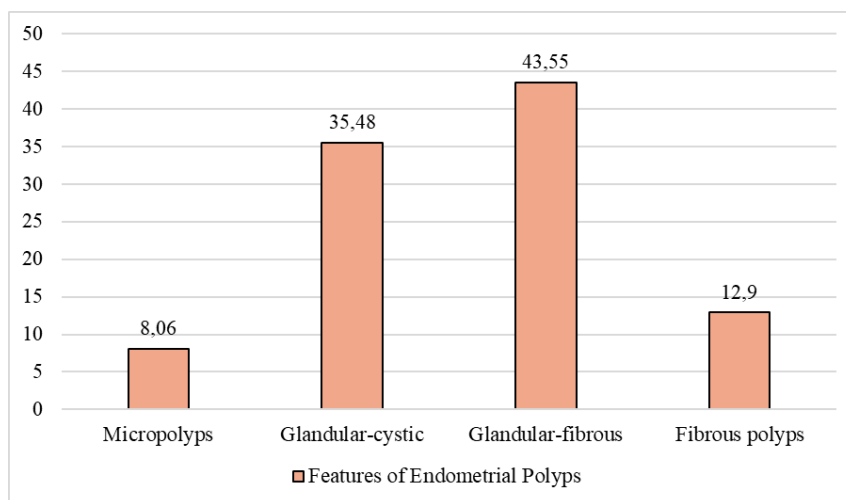


Fig. 1. Distribution of uterine polyps according to their morphological structure, %.

Table 1. Morphological characteristics of uterine polyp structure and surrounding endometrial tissue, AV, (%)

	Micropolyps, n=5	Glandular-cystic polyps, n=22	Glandular-fibrous polyps, n=27	Fibrous polyps, n=8
Non-atypical endometrial hyperplasia	4 (80 %)	14 (63.64 %)	12 (44.44 %)	3 (37.5 %)
Endometrium that matches the day of menstrual cycle	1 (20 %)	8 (36.36 %)	15 (55.56 %)	5 (62.5)

3 (37.5 %) women had fibrous polyps (Fig. 2). It should be noted that, according to literature, endometrial polyps larger than 15 mm are associated with hyperplasia [9].

Morphologically, the signs of non-atypical endometrium hyperplasia in the tissue outside the uterine polyp were characterized by an increased number of irregularly distributed glands, well-developed and hyperplastic cytogenetic stroma. The glands were varied in number and shape, some of them resembled cystic atrophy (transformation), and the endometrium lining of the cavity of the uterus was represented by a high columnar epithelium with multiple rows of nuclei and a clearly defined apical edge of the cells. The nuclei are oval or slightly elongated, rich in chromatin, without any signs of atypia. The cytoplasm of the epithelial cells was basophilic, but there were cells that had a light transparent cytoplasm. Stromal cells were somewhat enlarged in volume, the cytoplasm was acidophilic. A moderate mitotic activity was observed in the cells of the glands and stroma.

Also, continuing the morphological analysis of the uterine polyps in the examined women, we carried out an assessment of the histological characteristics of polyps that according to the literature are divided into types: the first type of characteristics are those that contain the elements of the functional endometrium and respond to estrogens and progesterone, structurally resembling the stroma of the hyperplastic endometrium, the second type of characteristics are true polyps that originate from glands of the basal type, immature basal layer (these polyps are insignificantly hormone-dependent), whose stroma consists of fibrous and smooth muscle elements [8].

Thus, among the examined patients the signs of the basal component were detected in 3 out of 8 (37.5%) patients with fibrous polyps, 9 out of 49 (18.7 %) women had signs of the glandular structure of endometrial polyps and there were no cases of verification of endometrial micropolyps.

The above-mentioned features characterize one of the pathogenetic links in the management tactics of patients of the reproductive age with uterine polyps – more than a third of patients with fibrous polyps and 19 % of women with glandular endometrial polyps were not susceptible to hormonal influences.

A characteristic morphological feature of the glandular polyps of the endometrium (glandular-cystic and glandular-fibrous) during the chronic inflammatory process was the irregular and disordered distribution of glands of various

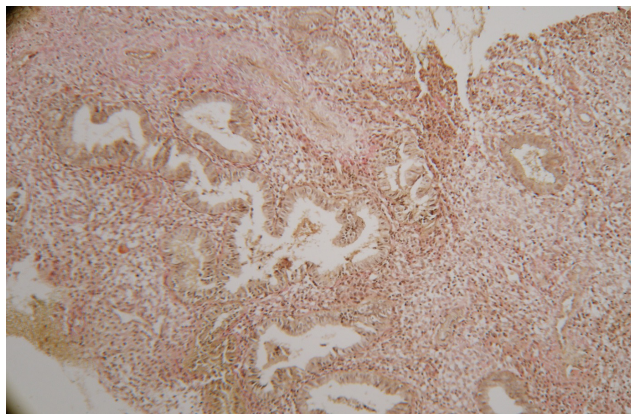


Fig. 2. Fibrous polyp on a broad base, basal layer, with microlesion of glandular non-atherosclerotic endometrium. Proliferative phase. Van Gieson Staining. Patient L., 41 year old, 100X zoom.

shapes and sizes, there were phenomena of diffuse irregular fibrosis in the stroma, with foci of the accumulation of lymphocytes, single plasma cells. The part of the glands in lumen was narrow, others were extended and, even with the cystic enlargement, some glands had a serrated tortuous pattern. The glandular structures are lined with a high prismatic epithelium of a proliferative type, and the epithelium in the cystic glands has a flattened form. The fibrovascular core of the polyps contained fibrous and smooth muscle fibres, given that the glands were arranged unorderedly and elongated in accordance with the shape of the stalk of polyps, and the blood vessels had sclerotized, thickened walls, forming the tangles at the base of the polyps (Fig. 3).

As for morphological features in case there was endometrial micropolyposis, the signs of chronic endometritis were detected with the severe lymphoplasmacytic infiltration, dyschronosis (Fig. 4), in a number of studies (glandular and cystic structure) the signs of breakdown of the gland walls were revealed (Fig. 5).

Considering the importance of understanding the role of the inflammatory process, the next important step in our studies was to evaluate the signs of inflammation in the endometrial polyp tissue and surrounding tissues. Using a universal highly sensitive CD-138 marker in plasmacytes in the polyp tissue as well as in the surrounding tissue of the examined patients, it revealed a number of important associations (Table 2).

Thus, the combination of morphological signs of endometrial micropolyposis and non-atypical hyperplasia of the endometrium, which was observed in most cases with this pathology (80 %), we found a positive reaction of CD-138 in both substrates – in the plasmacytes of the micropolyps and in the surrounding hyperplastic tissue. In one (20.0 %) case with no signs of hyperplastic changes of the surrounding tissue of the endometrial micropolyp, the CD-138 reaction was negative, which was duplicated in the tissue of the micropolyp.

During the verification of glandular and cystic uterine polyps the vast majority of the examined patients – 14 of 22 (63.64 %) patients – showed signs of the combination with non-atypical endometrial hyperplasia, in which the plasmacytic marker CD-138 was detected in both the polyp tissue and the hyperplastic endometrium in the vast majority of them i.e. in 8 out of 14 (57.14 %) women, while in the

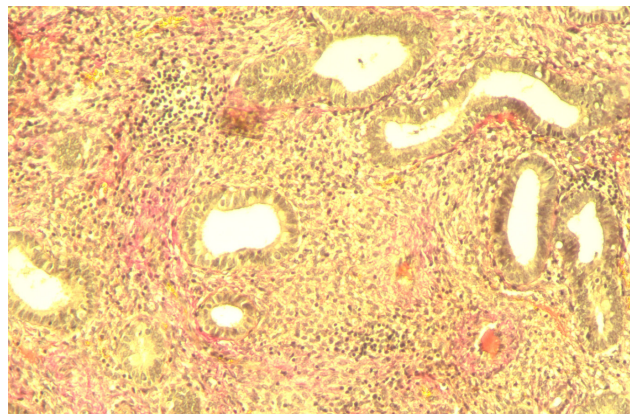


Fig. 3. Glandular polyp of endometrium. Fibrovascular core, lymphocytic infiltration of the stroma and chaotic glandular structures. Proliferative phase. Van Gieson Staining. Patient B., 36 y.o., 100X zoom.

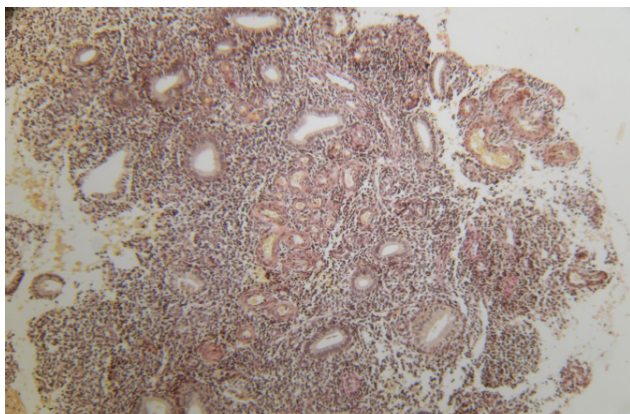


Fig. 4. Micropolyps. Inflammatory infiltration. Severe lymphoplasmacytic infiltration. Dyschronosis. Proliferative phase. Van Gieson Staining. Patient M., 34 y.o., 50X zoom.

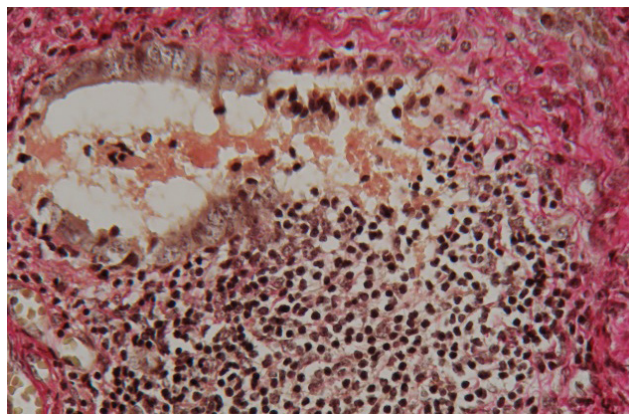


Fig. 5. Glandular-fibrous polyp. Lymphocytic infiltration. Breakdown (melting) of the gland wall due to the inflammatory process. Proliferative phase. Hematoxylin-eosin staining. Patient D., 40 y.o., 200X zoom.

Table 2. Signs of inflammatory reaction in the endometrial polyp tissue and its adjacent tissues, n (%).

	Micropolyposis, n=5	Glandular-cystic polyps, n=22	Glandular-fibrous polyps, n=27	Fibrous polyps, n=8
Non-atypical endometrial hyperplasia, CD-138 +	4 (80.0 %)	8 (36.4 %)	5 (18.5 %)	2 (25.0 %)
Non-atypical endometrial hyperplasia, CD-138 -	-	6 (27.3 %)	7 (26.0 %)	1 (12.5 %)
Unaltered endometrium, CD-138 +	-	2 (9.1 %)	5 (18.5 %)	1 (12.5 %)
Unaltered endometrium, CD-138 -	1 (20.0 %)	6 (27.3 %)	10 (37.0 %)	4 (50.0 %)

endometrial polyp tissue that was formed in the setting of a well-functioning endometrium, this marker was found in 2 out of 8 (25 %) patients, which was detected in both types of tissues with the help of the immunohistochemical technique (Fig. 6).

The combination of glandular-fibrous polyps with non-atypical endometrial hyperplasia was observed in 12 of 27 (44.44 %) patients, which was characterized by a unilateral CD-138 positive response in 5 of 12 (41.67 %) patients as in the tissue fragment of the uterine polyp and adjacent hyperplastically altered endometrial tissue, while in 15 of 27 (55.56 %) patients from this group who had signs of a normally functioning endometrium, the percentage of positive CD-138 response was only detected in 5 out of 15 (33.3) cases.

3 (37.5 %) out of 8 examined patients with fibrous endometrial polyps verified the signs of non-atypical hyperplasia of endometrium, during the test for the presence of the CD-138 reaction it revealed its positive staining in 2 out of 3 (66.67 %) patients in both the polyp tissue and in the surrounding endometrial tissue (Fig. 7).

The above-mentioned data is the tangible evidence that the unilateral identification of the positive expression of the CD-138 inflammatory marker, both in the tissue of the uterine polyp and in the endometrial tissue around it, indicates the cohesion of the inflammatory factor in the pathogenesis of endometrium hyperproliferative processes in women of reproductive age, and proves that the inflammatory process (43.5%) plays a significant role in the development of endometrial pathological conditions, and justifies the need to take this fact into account in the approaches to the management tactics of such patients.

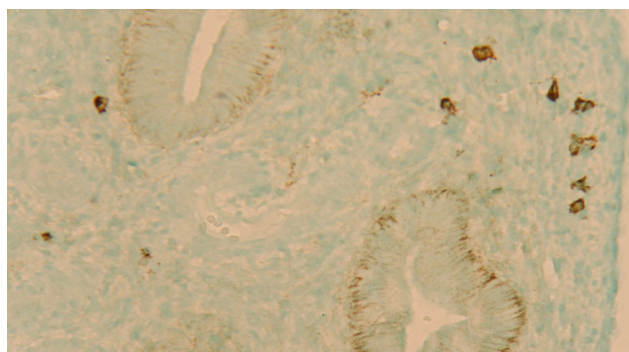


Fig. 6. Glandular endometrial polyp in the setting of unaltered endometrial tissue. Clear visualization of the positively stained plasmacytes of cytoplasm, and non-specific membrane staining is also seen. Proliferative phase. Immunohistochemical reaction CD-138 positive. Patient L., 38 y.o., 250X zoom.

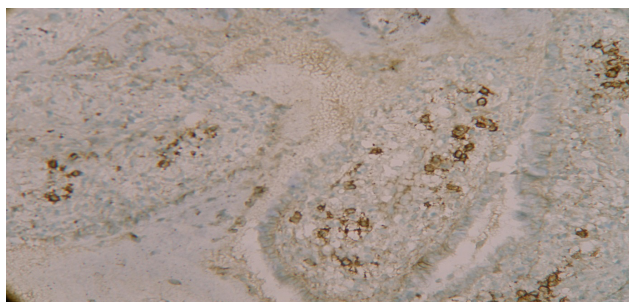


Fig. 7. Fibrous endometrial polyp with non-atypical glandular hyperplasia microlesions. Prominent clumps of plasmacytes with a pronounced positive reaction of CD-138, lesions of lymphoplasmacytic infiltration. Proliferative phase. Immunohistochemical reaction CD-138 positive. Patient L., 33 y.o., 250X zoom.

**CONCLUSIONS** 1. In the structure of benign endometrial hyperproliferative processes in women of reproductive age uterine polyps were distributed as follows: the glandular component was verified in 79.03 % of the cases, of which the glandular-cystic structure was found in 35.48 % of female patients, the glandular-fibrous structure was detected in 43.55 % of patients, approximately the same values were identified as for fibrous polyps and micropolyps of the endometrium in 12.90 % and 8.06 % of cases respectively. The frequency of occurrence of the benign hyperproliferative component in combination in women of reproductive age: uterine polyps and non-atypical endometrial hyperplasia were detected from 80 % in patients with endometrial micropolyposis to 37.5 % in case of the verification of endometrial fibrotic polyps. 2. The results of the morphological and immu-

nohistochemical studies show that in 43.5 % of cases the inflammatory process provides the basis for the formation of uterine polyps, this fact is confirmed morphologically by the presence of chronic endometritis and a positive response to CD-138. 3. The study of pathogenetic mechanisms of the formation of endometrial pathology is the key to developing methods for correcting these pathological processes and thus it helps to increase the rates of treatment success and maintain good reproductive health.

**Prospects for future research** In our opinion, the findings justify the pathogenetic cohesion in the occurrence of hyperproliferative processes of female reproductive organs, but also it requires further detailed study to find the most effective and economically feasible treatment regimens and preventative measures against such pathological conditions.

#### LIST OF LITERATURE

1. Haque M. Endometrial polyp. PathologyOutlines.com Website / M. Haque, W. Mneimneh. [Electronic resource]. Access mode : <http://www.pathologyoutlines.com/topic/uterusenodopolyp.html>. (Accessed May 19th, 2019).
2. Clark T. J. Endometrial Polyps and Abnormal Uterine Bleeding (AUB-P): What is the relationship, how are they diagnosed and how are they treated? / T. J. Clark, H. Stevenson // Best Pract. Res. Clin. Obstet. Gynaecol. – 2017. – Vol. 40. – P. 89–104.
3. Annan J. J. The management of endometrial polyps in the 21st century / J. J. Annan, J. Aquilina, E. Ball // The Obstetrician & Gynaecologist. – 2012. – Vol. 14. – P. 33–38.
4. Metastasis of breast cancer to an endometrial polyp, the cervix and a leiomyoma: A case report and review of the literature / S. Razia, K. Nakayama, M. Tsukao [et al.] // Oncol. Lett. – 2017. – Vol. 14 (4). – P. 4585–4592.
5. Tuberculosis endometrial polyp / J. Seror, E. Faivre, S. Prevot, X. Deffieux // Case Rep. Obstet. Gynecol. – 2013. – Vol. 2013. – P. 176124.
6. Primary pulmonary carcinoid tumor with metastasis to endometrial polyp / M. Momeni, V. Kolev, D. Costin [et al.] // Int. J. Surg. Case Rep. – 2013. – Vol. 4 (1). – P. 91–93.
7. Endometrial micropolyps at fluid hysteroscopy suggest the existence of chronic endometritis / E. Cicinelli, L. Resta, R. Nicoletti [et al.] // Hum. Reprod. – 2005. – Vol. 20 (5). – P. 1386–1389.
8. Салов И. А. Современные представления о этиологических факторах и факторах риска развития гиперпластических процессов эндометрия Сообщение 1. Оценка эпидемиологической ситуации. Классификация гиперпластических процессов эндометрия. Патоморфологическая характеристика. Современные представления о этиологических факторах и факторах риска развития гиперпластических процессов эндометрия. Отчет 1. Оценка эпидемиологической ситуации. Классификация гиперпластических процессов эндометрия. Морфологические признаки / И. А. Салов, Н. П. Чеснокова, В. В. Курникова // Успехи современного естествознания. – 2004. – № 1. – С. 37–40. Доступно по адресу: <http://www.naturalsciences.ru/article/view?id=12097>
9. Lasmar B. P. Endometrial polyp size and polyp hyperplasia / B. P. Lasmar, R. B. Lasmar // Int. J. Gynaecol. Obstet. – 2013. – Vol. 123 (3). – P. 236–239.
10. Special Article AAGL Practice Report: Practice Guidelines for the Diagnosis and Management of Endometrial Polyps // Journal of Minimally Invasive Gynecology. – 2012. – Vol 19, No. 1. – P. 3–10.
11. Кондриков Н. И. Патология матки : руковод. для врачей / Н. И. Кондриков, И. В. Баринанова. – 2-е изд. – М. : Практическая медицина, 2019. – 352 с.
12. The pathogenesis of endometrial polyps: a systematic semi-quantitative review / U. Indraccolo, R. Dilorio, M. Matteo [et al.] // European Journal of Gynaecological Oncology. – 2013. – Vol. XXXIV, No. 1. – P. 5–22.
13. Endometrial polyps: Pathogenesis, sequelae and treatment / N. P. Nijkang, L. Anderson, R. Markham, F. Manconi // SAGE Open Med. – 2019. – Vol. 7. – P. 2050312119848247.
14. Clinical characteristics of 42 cases of malignant endometrial polyps / Z. Tang, R. Zhou, D. Bao [et al.] // Zhonghua Fu Chan Ke Za Zhi. – 2014. – Vol. 49. – P. 204–207.
15. Prevalence of endometrial polyps and abnormal uterine bleeding in a Danish population aged 20–74 years / E. Dreisler, S. Stampe Sorensen, P. H. Ibsen [et al.] // Ultrasound Obstet. Gynecol. – 2009. – Vol. 33 (1). – P. 102–108.
16. Matched controlled study to evaluate the effect of endometrial polyps on pregnancy and implantation rates following in vitro fertilization-embryo transfer (IVF-ET) / J. H. Check, C. A. Bostick-Smith, J. K. Choe [et al.] // Clin. Exp. Obstet. Gynecol. – 2011. – Vol. 38 (3). – P. 206–208.
17. Malignant and premalignant changes in the endometrium of women with an ultrasound diagnosis of endometrial polyp / P. Gambadauro, M. A. Martinez-Maestre, J. Schneider [et al.] // J. Obstet. Gynaecol. – 2014. – Vol. 34. – P. 611–615.
18. Bokhman, Ya.V. Rukovodstvo po onkoginekologii / Ya. V. Bokhman. – St. Pb. : LLC "Foliant Publishing House", 2002. – 324 p.

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#### МОРФОЛОГІЧНІ ОСОБЛИВОСТІ ПОЛІПІВ ТІЛА МАТКИ У ЖІНОК РЕПРОДУКТИВНОГО ВІКУ

**Резюме.** Згідно з сучасними поглядами, що базуються на даних доказової медицини, визначено поняття "поліп ендометрія" як доброякісне вузлове екзофітне утворення слизової тіла матки, що складається із залоз та стромы, переважно фіброзної, яка містить "клубок" товстостінних кровоносних судин.

**Мета дослідження** – вивчити морфологічні особливості тканин поліпів тіла матки та ендометрія із встановленням ролі запального фактора в патогенезі гіперпроліферативних його змін у жінок репродуктивного віку.

**Матеріали і методи.** У статті наведено результати обстеження 62 пацієнток репродуктивного віку з поліпами тіла матки. Встановлено наявність залозистого компонента в 79,03 % випадків, фіброзних поліпів – у 12,9 %, мікрополіпів – у 8,06 % відповідно. Поєднання поліпів із неатиповою гіперплазією ендометрія виявлено у 80 % пацієнток із мікрополіпозом, в 63,6 % жінок

– із залозисто-кістозними поліпами тіла матки, у 44,4 % обстежених – із залозисто-фіброзними поліпами ендометрія й у 37,5 % пацієнток – із фіброзними поліпами. Імуногістохімічно виявлено експресію CD-138 як в тканинах поліпів тіла матки, так і прилеглих ендометріальних тканинах у 43,5 % випадків, що стало маркером хронічного ендометриту в частини обстежених, що лягло в основу патогенетичних підходів при лікуванні такої патології. Для обробки даних використовували стандартні процедури за допомогою Microsoft Excel. Дослідження проводили в лабораторії патоморфології ДУ "ІПАГ імені академіка О. М. Лук'янової НАМН України", керівник – член-кореспондент НАМН України, професор Т. Д. Задорожна.

**Результати досліджень та їх обговорення.** При клінічному аналізі скарг обстежених із поліпами тіла матки клінічні прояви у вигляді порушення менструального циклу мали 13 (20,97 %) хворих, в 11 (17,74 %) пацієнток були відсутні скарги на бажану вагітність, разом з тим, як 38 (61,29 %) жінок звернулися з метою проведення профілактичного огляду, що не суперечить показникам інших дослідників. При проведенні морфологічного дослідження ми встановили наступні особливості поліпів тіла матки у жінок репродуктивного віку: найчастіше верифікували поліпи тіла матки, які мали залозистий компонент, – у 49 (79,03 %) випадків, з них залозисто-кістозну структуру виявлено у 22 (35,48 %) хворих, залозисто-фіброзна будова була у 27 (43,55 %) пацієнток, приблизно однакові значення виявились у фіброзних поліпів тіла матки – 8 (12,90 %) жінок та мікрополіпів ендометрія – у 5 (8,06 %) випадків відповідно. Ми встановили, що в усіх групах обстежених із поліпами тіла матки були ознаки неатипової гіперплазії ендометрія. Необхідно відмітити, що за даними літератури, поліпи ендометрія розміром понад 15 мм були пов'язані з гіперплазією. Вищенаведені дані є важливим свідченням того, що однонаправлені визначення позитивної експресії запального маркера CD-138 як в тканині поліпа тіла матки, так і в ендометріальній тканині вказують на єдність запального фактора у патогенезі гіперпроліферативних процесів та доводять значну роль запального процесу в розвитку його патологічних станів та обґрунтовують необхідність враховувати цей факт у підходах до тактики ведення хворих.

**Висновки.** Результати проведеного морфологічного та імуногістохімічного дослідження свідчать, що в основі формування поліпів тіла матки лежить запальний процес, що підтверджується морфологічно наявністю хронічного ендометриту та позитивною реакцією на CD-138. Вивчення патогенетичних механізмів формування патології ендометрія є ключовим моментом у розробці методів корекції цих патологічних процесів, що тим самим дозволяє підвищити ефективність лікування та зберегти репродуктивне здоров'я.

**Ключові слова:** поліп тіла матки; гіперплазія ендометрія; хронічний ендометрит; CD-138.

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#### МОРФОЛОГИЧЕСКИЕ ОСОБЕННОСТИ ПОЛИПОВ ТЕЛА МАТКИ У ЖЕНЩИН РЕПРОДУКТИВНОГО ВОЗРАСТА

**Резюме.** Согласно современным взглядам, основанных на данных доказательной медицины, определено понятие "полип эндометрия" как доброкачественное узловое экзофитное образование слизистой тела матки, состоит из желез и стромы, преимущественно фиброзной, которая содержит "клубок" толстостенных кровеносных сосудов.

**Цель исследования** – изучить морфологические особенности тканей полипов тела матки и эндометрия с установлением роли воспалительного фактора в патогенезе гиперпролиферативных его изменений у женщин репродуктивного возраста.

**Материалы и методы.** В статье приведены результаты обследования 62 пациенток репродуктивного возраста с полипами тела матки. Установлено наличие железистого компонента в 79,03 % случаев, фиброзных полипов – в 12,9 %, микрополипов – в 8,06 % соответственно. Сочетание полипов с неатипической гиперплазией эндометрия обнаружено в 80 % пациенток с микрополипозом, в 63,6 % женщин – с железисто-кистозными полипами тела матки, в 44,4 % обследованных – с железисто-фиброзными полипами эндометрия и у 37,5 % пациенток – с фиброзными полипами. Имуногистохимически обнаружено экспрессию CD-138 как в тканях полипов тела матки, так и прилегающих эндометриальных тканях в 43,5 % случаев, что стало маркером хронического эндометрита в части обследованных, что легло в основу патогенетических подходов при лечении такой патологии. Для обработки данных использовали стандартные процедуры с помощью Microsoft Excel. Исследования проводились в лаборатории патоморфологии ГУ "ИПАГ имени академика А. М. Лукьяновой НАМН Украины", руководитель – член-корреспондент НАМН Украины, профессор Т. Д. Задорожна.

**Результаты исследований и их обсуждение.** При клиническом анализе жалоб обследованных с полипами тела матки клинические проявления в виде нарушения менструального цикла имели 13 (20,97 %) больных, у 11 (17,74 %) пациенток отсутствовали жалобы на желаемую беременность, вместе с тем, как 38 (61,29 %) женщин обратились с целью проведения профилактического осмотра, не противоречит показателям других исследователей. При проведении морфологического исследования мы установили следующие особенности полипов тела матки у женщин репродуктивного возраста: чаще верифицировали полипы тела матки, которые имели железистый компонент, – в 49 (79,03 %) случаев, из них железисто-кистозную структуру выявлено у 22 (35,48 %) больных, железисто-фиброзное строение было у 27 (43,55 %) пациенток, примерно одинаковые значения оказались в фиброзных полипов тела матки – 8 (12,90 %) женщин и микрополипов эндометрия – у 5 (8,06 %) случаев соответственно. Мы установили, что во всех группах обследованных с полипами тела матки были признаки неатиповой гиперплазии эндометрия. Необходимо отметить, что по данным литературы, полипы эндометрия размером более 15 мм были связаны с гиперплазией. Вышеприведенные данные являются важным свидетельством того, что однонаправленные определения положительной экспрессии воспалительного маркера CD-138 как в ткани полипа тела матки, так и в эндометрии указывают на единство воспалительного фактора в патогенезе гиперпролиферативных процессов и доводят значительную роль воспалительного процесса в развитии его патологических состояний и обосновывают необходимость учитывать этот факт в подходах к тактике ведения больных.

**Выводы.** Результаты проведенного морфологического и иммуногистохимического исследования показывают, что в основе формирования полипов тела матки лежит воспалительный процесс, что подтверждается морфологически наличием хронического эндометрита и положительной реакцией на CD-138. Изучение патогенетических механизмов формирования патологии эндометрия является ключевым моментом в разработке методов коррекции этих патологических процессов, тем самым позволяет повысить эффективность лечения и сохранить репродуктивное здоровье.

**Ключевые слова:** полип тела матки; гиперплазия эндометрия; хронический эндометрит; CD-138.

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