

CLINICO-PATOGENIC ASPECTS OF ENDOMETRIAL HYPERPROLIFERATIVE PROCESSES ASSOCIATED WITH CHRONIC ENDOMETRITIS

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Resume: Endometrial hyperproliferative processes are accumulated by one of the most common gynecological pathologies, progressing to atypical endometrial hyperplasia and endometrial cancer. Given the lack of efficiency of hormonal prophylaxis of endometrial hyperproliferative processes, theories about the inflammatory genesis of this process are gaining ever greater evidence. The work is based on a prospective study of 30 women with recurrent endometrial polyps, who underwent hysteroscopy with subsequent histological, immunohistochemical research and PCR with the determination of uterine cavity microbiocenosis.

Keywords: endometrial hyperproliferation, chronic endometritis.

Introduction. Endometrial hyperproliferative processes is one of the most common gynecological pathologies. Having a complex pathogenesis and the definition of the inflammatory agent as one of the etiopathogenic factors of the development of hyperproliferative processes of endometrium, new perspectives for the study and development of approaches to the treatment and prevention are opened. The rates of hyperproliferative processes of endometrium according to various data ranges from 20 to 40% among the structure of gynecological pathology [1,2].

According to the modern ideas, one of the etiological factors of endometrial hyperproliferative processes is relative or absolute hyperestrogenism, but the lack of effect from the standard therapeutic and prophylactic regimens leads to the idea of new theories of endometrial hyperproliferation, and the presence of a greater number of etiological factors contributing the development of this pathology.

More and more adherence and evidence are asserted about the role of chronic endometritis, as the causes of the occurrence and recurrence of en-

ometrial hyperproliferative processes. Clinical symptoms of this disease are quite diverse, and therefore requires differential diagnosis with symptoms of a number of other gynecological diseases. A lack of a standardized view on the diagnosis and classification of hyperproliferative endometrial processes leads to discrepancies in the choice of therapeutic approaches to treatment and prevention. [3,4,7].

Despite the considerable prevalence of chronic endometritis (60-65%), and widespread use by specialists of the immunohistochemical diagnostic method, the issues of its treatment and prevention remain controversial and indeterminate [5,6].

Today, chronic endometritis is considered as a complex clinical-morphological syndrome, which in most cases is associated with loss of receptor of the endometrium that manifests itself as infertility. However, there is growing evidence of the impact of chronic inflammation of the endometrium on proliferation processes, with the initiation of hyperproliferative endometrial processes, with possible manifestation of abnormal uterine bleeding, which can worsen quality of life of the female population and increase the risk of endometrial cancer. This is evidenced by high levels of oncogynecological incidence, including endometrial cancer, with a lack of a tendency to decrease (Fig. 1) [8].

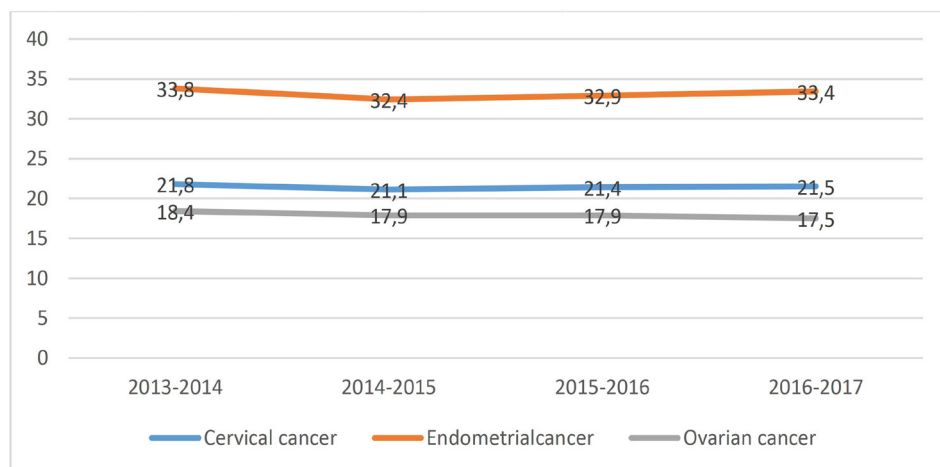


Fig. 1. Gynecological oncology morbidity. Ukrainian national cancer registry.

That's why, the study of the connections of endometrial hyperproliferative processes with chronic endometritis, the development of pathogenetically valid approaches to diagnosis, treatment and prevention, as well as the potential reduction of clinical manifestations, correction and preservation of menstrual, reproductive function and the prevention of oncopathology are important problems of modern medicine.

The purpose of the study was to learn the clinical and morphological features of endometrial hyperproliferation associated with chronic endometritis with histological, immunohistochemical examination of endometrial specimens and determination of the biocenosis of endometrial samples by PCR.

Material and methods. The study included 30 patients diagnosed with transvaginal ultrasound of the pelvic floor with endometrial polyps. 100% of patients had a history of the incidence of hyperproliferative endometrial processes, with hysteroscopy and postoperative gestagen therapy. The average diagnosis of relapse was 2.3 years. The average age of patients was 35.1 years. Resection of endometrial polyps was performed by hysteroscopy with an electrosurgical resection. (Fig 3).

Fragments of endometrial polyps were sent to a pathomorphological laboratory for histological examination, an immunohistochemical study with the determination of a marker of chronic endometritis (CD138), determination of expression of estrogen and progesterone receptors, and the study of endometrial polyps fragments by real-time PCR for 23 pathogens (Tab. 1).



Fig. 3. Hysteroscopy. Endometrial polyp.

Table 1.

Real-time PCR for 23 pathogens.

Transient microflora
Lactobacillus spp.
Normoflora
Staphylococcus spp.
Streptococcus spp.
Corynebacterium spp.
Conditionally pathogenic flora
Gardnerella vaginalis
Megasphaera spp. / Veillonella spp. / Dialister spp.
Sneathia spp. / Leptotrichia spp. / Fusobacterium spp.
Ureaplasma urealyticum
Ureaplasma parvum
Mycoplasma hominis
Atopobium cluster
Bacteroides spp. / Porphyromonas spp. / Prevotella spp.
Anaerococcus spp.
Peptostreptococcus spp. / Parvimonas spp.
Eubacterium spp.
Haemophilus spp.
Pseudomonas aeruginosa / Ralstonia spp. / Burkholderia spp.
Enterobacteriaceae spp. / Enterococcus spp.
Candida spp.
Pathogens
Mycoplasma genitalium
Trichomonas vaginalis
Neisseria gonorrhoeae
Chlamydia trachomatis

At the same time, preventing the colonization of the investigated material by foreign flora, and, accordingly, preserving the authenticity of the data was provided by preoperative treatment of the vagina and cervix, and avoiding the contact of fragments of removed endometrial polyps with the vagina walls and other surfaces.

Results and discussion. As a result of the study, endometrial polyps were confirmed in 30 patients (100%) by hysteroscopy. In addition, the percentage difference between single endometrial polyps and endometrial polyposis was 76.6% to 23.4%.

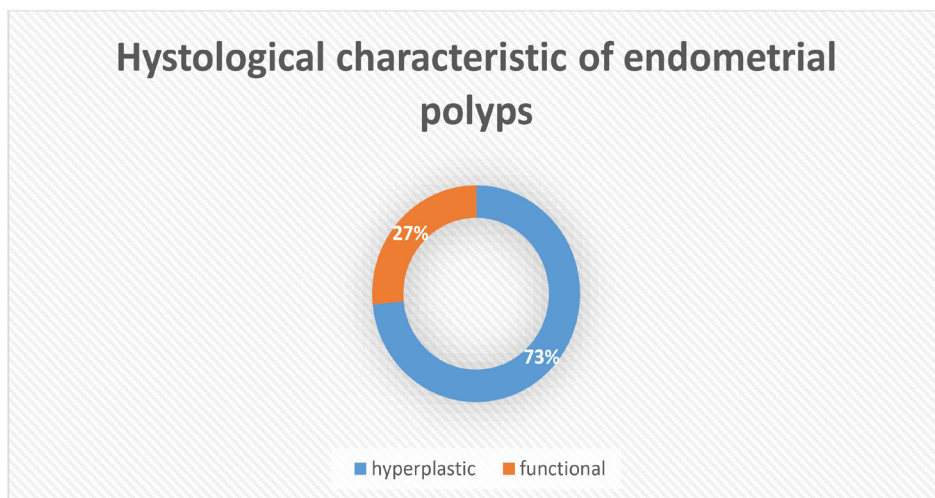


Fig. 2. Hystological characteristic of endometrial polyps

According to an immunohistochemical study of the endometrium for the determination of the CD138 marker, chronic endometritis has been confirmed in 26 patients of the study group (86.6%).

Histological study of fragments of resected polyps of endometrium confirmed the correspondence of macroscopic estimation of formations with morphological structure. Histologically endometrial polyps were represented by a hyperplastic type glandular-fibrous endometrial polyps (73.4%) and a functional type glandular-fibrous polyps (26.6%).

Immunohistochemical determination of expression of estrogen and progesterone receptors revealed high expression of receptors in all endometrial samples of patients in the study group (100%).

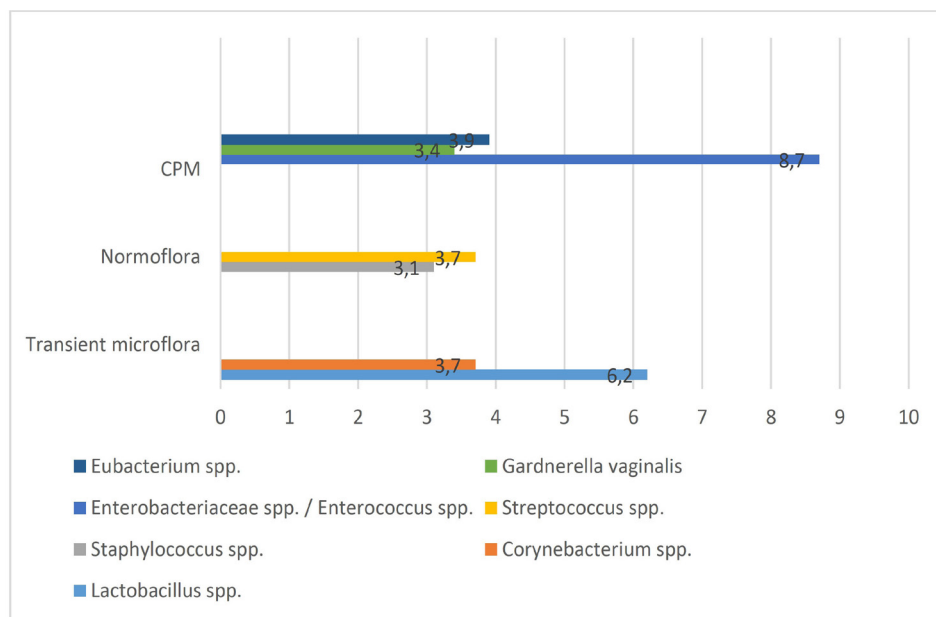


Fig. 2. Real-time PCR results.

According to the study of endometrial tissue by RT-PCR, the total bacterial mass of the samples under study was 108.0 to 108.7. Transitory flora represented by *Lactobacillus* spp. (104.1 – 106.2). In 52.4% of the studied normoflora, *Staphylococcus* spp. (103.1) and *Streptococcus* spp. (103.1 – 103.7). Only *Streptococcus* spp. was present in 32.7%. (103.1 – 103.7). In 14.9% of the transient flora in the form of *Corynebacterium* spp. (103.7). In 30 patients (100%) in the investigated material there was a conditionally pathogenic flora. *Enterobacteriaceae* spp. / *Enterococcus* spp. present in all patients in the study group in the amount from 108.1 до 108., which accounts for most of the total bacterial mass of the test substance. *Gardnerella vaginalis* is diagnosed in 11 patients (36.6%), in the amount of 103.4. *Eubacterium* spp. and *Pseudomonas aeruginosa* / *Ralstonia* spp. / *Burkholderia* spp. found in quantities up to 103.9. (Fig. 2).

Conclusions. 1. It has been established that chronic endometritis occurs in most patients with recurrent hyperproliferative endometrial processes. And the fact that patients of the study group received postoperative prophylactic hormone replacement therapy, and subsequently had

a relapse, suggests the impact of chronic endometritis on the processes of proliferation of the endometrium.

The study of microbiocenosis in the uterine cavity indicates the presence of a conditionally pathogenic microflora, which is the major part of the total bacterial mass, and in the amount of clinical significance.

The obtained data point to the need to revise the approaches to the use of traditional therapeutic and prophylactic regimens for the treatment of endometrial hyperproliferative processes, taking into account the significance of the chronic endometritis.

The results of the study confirm the opinion about the differences in the microbiocenosis of various sections of the reproductive tract of women of reproductive age, with the need for an individual approach to diagnosis and therapy.

Further studies of this issue remain relevant, with the expansion of the study group of patients, the creation of a control group, the determination of the sensitivity of the microflora to antibacterial drugs and the evaluation of combined anti-rabies treatment, taking into account both the hormonal imbalance and the value of the microbial agent.

The presence of opportunistic and transient microflora in patients with a negative immunohistochemical marker of chronic endometritis (CD138), gives grounds to suspect this fact as an early predictor of chronic endometritis, which requires further research.

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