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Menorrhagia - One of the Formidable Complications in Gynecology

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ABSTRACT

The World Health Organization (WHO) review presents data on 14 countries of the world, indicating a significant prevalence of menorrhagia in clinical practice, the number of which is 15-19% of the female population in general.

In recent decades, there has been an increase in the frequency of uterine bleeding, including menorrhagia, which may be due to a number of reasons [1-3]:

- ✓ an increase in the total number of menstrual cycles with a longer life expectancy of modern women;
- ✓ earlier menarche;
- ✓ an increase in the intergenetic interval between childbirth;
- ✓ a decrease in the period of breastfeeding, etc.

Menorrhagia can occur at various age periods of a woman's life, but most often – at reproductive age and perimenopause. As is known, menorrhagia is cyclical, coinciding with menstruation, prolonged and abundant uterine bleeding, which has a negative impact on the physical, social and emotional quality of a woman's life [4, 5, 31,32,33].

It should be noted that due to the weak correlation between the true blood loss during menstruation and its subjective perception, 30-40% of women regard it as physiological and do not consult a doctor or turn already when complaints due to anemia appear [1, 9,34,35]. The normal duration of menstrual bleeding is 3-7 days, the total blood loss ranges from 40 to 80 ml.

Thus, menorrhagia can be talked about with a duration of bloody discharge of more than 7 days

and blood loss of more than 80 ml. With monthly blood loss of more than 80-100 ml, most women have a negative balance of iron in the body, the level of hemoglobin decreases and anemia of various degrees of severity may develop [10, 11,27].

It is customary to distinguish 3 main types of uterine bleeding by type of menorrhagia [11,28,29,30]:

- organic menorrhagia caused by diseases of the reproductive system (uterine fibroids, endometriosis, genital infections, endometrial polyps, endometrial hyperplasia, etc.);
- dysfunctional menorrhagia (ovulatory and anovulatory), menorrhagia caused by extragenital diseases (blood, liver diseases);
- iatrogenic menorrhagia associated with frequent blood sampling for examination, bloodletting, etc.).

Menorrhagia in 25% of cases are due to organic causes, and in 75% are the result of functional disorders in the hypothalamic-pituitary-ovarian system [10, 12,26,35].In this regard, the basic principle of differential diagnosis of various types of menorrhagia is to exclude organic causes of bleeding, i.e. gynecological, extragenital and other diseases with appropriate clinical and anamnestic examination and laboratory and instrumental diagnostics (blood tests, determination of hormone levels, coagulogram, ultrasound, ultrasound, etc.). If endometrial pathology is suspected hysteroscopy is performed with separate diagnostic scraping of the walls of the uterine cavity and the cervical canal and subsequent morphological examination of the obtained material. The results of the examination allow in each case to solve questions about the cause of bleeding or the need for additional research. Of the additional research methods, it is important to determine the cancer markers CA-125, CA-19 in the blood serum, in particular, if the tumor genesis of the disease is suspected [22.23,24]. It should be noted that the pathogenesis of menstrual bleeding involves a large number of cellular regulators, growth factors, cytokines that affect the vascular and stromal components of the endometrium, its regeneration and proliferation [4, 13,25,35].

Significant blood loss during menstruation is associated with the activation of fibrinolysis. Estrogens stimulate fibrinolysis, and progesterone inhibits this process by increasing the concentration of fibrinolysis inhibitors. Excessive activation of the fibrinolytic system can disrupt the balance of the hemostatic system, causing early destruction of blood clots in the endometrial vessels and increased blood loss, which contributes to the occurrence of menorrhagia. Normally, primary hemostasis in the endometrium is achieved not only by the formation of small blood clots in spiral arterioles, but also by their spasm. Menorrhagia therapy is carried out in accordance with the etiology, the degree of blood loss, the general condition of the patient and is aimed at correcting the identified organic pathology or restoring the normal menstrual cycle [14,36,37]. Nonsteroidal anti-inflammatory drugs, fibrolysis inhibitors, drugs that have an angioprotective effect and improve microcirculation, hormonal contraceptives, progestogens, etc. are used from pharmacological agents for the treatment of menorrhagia. However, medications are not always acceptable due to the possibility of side effects and a high frequency of relapses. For example, endometrial ablation is usually performed in the absence of the effect of conservative treatment. Separate diagnostic curettage is mandatory for the first bleeding, hysteroresectoscopy – for diagnosed submucosal uterine fibroids, endometrial polyps, embolization or sclerosis of uterine vessels – for their anomalies [15, 16,38]. In case of extragenital pathology (diseases of the blood, kidneys, liver, etc.), treatment of the underlying disease is necessary. Currently, for the treatment of functional menorrhagia in the absence of the effect of other methods of treatment, hysterectomy is used very rarely. One of the modern methods of menorrhagia treatment is the use of levonorgestrel-containing intrauterine hormonal

releasing system (LNH-IUD) Mirena due to its high efficiency, a significant reduction in blood loss during treatment, as well as due to its specific effect on the endometrium and the absence of relapses [2, 10,39,40]. In publications devoted to this problem, special attention is paid to the possibility of using this method to avoid surgical intervention, which 60% of women with menorrhagia were subjected to [17, 18,41,42]. Intrauterine administration of LNG-IUD suppresses endometrial proliferation. The glands of the endometrium decrease in size, atrophy, the walls of the vessels thicken and fibrosis, capillary thrombosis occurs. According to the majority of authors, endometrial changes are the most important mechanism of both contraceptive and therapeutic action of LNH–IUD [2, 19]. According to the authors, after the introduction of the LNG-IUD Mirena, menstrual blood loss becomes more scarce, its volume decreases by 86% [43,44,45,47]. A natural result of menorrhagia treatment is an increase in hemoglobin levels against the background of the use of LNG-IUD.

Thus, according to L.I.Ostreikova [4, 10,58], against the background of the use of LNG-IUD Mirena for 1 year, there is an increase in hemoglobin by 1.8–1.9 g / l in women who do not suffer from menorrhagia. In patients with menorrhagia, an increase in hemoglobin and other indicators of red blood correlates with the timing of blood loss reduction [15, 17,46,48,50]. In 20% of patients, amenorrhea develops at different times during the use of LNG-IUD Mirena, which should be regarded as a therapeutic effect of this method, especially in women with menorrhagia in perimenopause [4, 19,49.51].

The great advantage of the Mirena LNG-IUD is its high contraceptive effectiveness, approaching the effect of sterilization [20,52,53,54]. However, if sterilization is an irreversible method of contraception, then the contraceptive effect of the LNH-Mirena IUD is completely reversible and fertility is restored within 3-4 months after its extraction [3, 4,55,56]. It is very important that the use of LNG-IUD Miren, as well as other contraceptive hormonal agents, reduces the likelihood of the development of tumor processes of the reproductive system. According to WHO, 30 thousand are prevented annually in the world. cases of cancer of the reproductive system due to the use of hormonal contraception [6, 12,57]. It should be noted that a change in the morphology of the endometrial vessels, its thinning, swelling and increased fragility against the background of the use of LNG-IUD Mirena can cause irregular intermenstrual spotting in the first months of its use, which, as a rule, stop on their own. Therefore, their presence is not an indication for the removal of the intrauterine hormonal releasing system. Other possible side effects include the formation of functional ovarian cysts (12-15% of patients), which, as a rule, regress spontaneously for several weeks without any treatment, as evidenced by the results of ultrasound.

According to the WHO acceptance criteria (2010), absolute contraindications to the use of LNG-IUD Mirena are [6,57]:

- ✓ malignant neoplasms of the body or cervix;
- ✓ vaginal bleeding of unclear genesis;
- ✓ suspected or existing pregnancy;
- ✓ acute (subacute), chronic recurrent inflammatory process of the uterus and appendages;
- ✓ hemorrhagic manifestations, thrombophlebitis or thromboembolic disorders.

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