

L. angustifolia, extracted with water, which showed background antistaphylococcal activity at the level of 125 µg/ml.

THE ROLE OF HORMONES IN THE PATHOGENESIS OF ABNORMAL UTERINE BLEEDING AND ENDOMETRIAL HYPERPLASIA

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Relevance. Abnormal uterine bleeding is the single most common complaint that reproductive age women bring to their clinicians. Bleeding associated with a wide range of pathologies inside and outside the reproductive tract can masquerade as anovulatory bleeding. A thorough menstrual history and physical examination usually provide most of the information needed to distinguish anovulation from other causes of abnormal bleeding. Many of the published studies are restricted to estimates of the prevalence of the symptoms of heavy menstrual bleeding; when other symptoms, particularly those of irregular and intermenstrual bleeding are included, the prevalence rises to 35% or higher.

Aim. To observe the abnormal patterns of uterus bleeding and its` endocrinological aspects. To analyze the patter of pathophysiology hormones action on female reproductive system, which lead to endometrial hyperplasia.

Materials and methods. The study is based on the analysis of scientific articles, clinical studies and epidemiological data studying the role of hormones in the pathogenesis of abnormal uterine bleeding and endometrial hyperplasia. A systematic approach was applied to evaluate the available scientific evidence.

Results and conclusions. Doctors use a wide variety of terms to describe abnormal patterns of menstrual bleeding: they are amenorrhea, absent menses; oligomenorrhea, infrequent menses occurring at intervals > 35 days; polymenorrhea, frequent menses, occurring at intervals < 24 days; metrorrhagia menses, occurring at irregular intervals; menorrhagia or abnormally long or heavy menses, lasting > 7 days; hypermenorrhea or involving blood loss > 80 mL. There are many reasons of abnormal uterus bleeding, especially hormonal drugs like oral contraceptives (OCP) and oral progesterone (norethisterone, medroxyprogesterone acetate, dydrogesterone). Combined OCP exactly reduces bleeding by 50%, has good cycle control + contraception – its` positive side effects. Despite these good sides, they have cautions use in early teenage because of risk of early epiphysal arrest. Oral progesterone also reduces bleeding by 50%. Androgenic steroids lead to endometrial atrophy and androgenic side effects with 60% blood reduction. Gonadotropin-releasing hormone agonist usage can lead to hypoestrogenic state, induces medical menopause and causes endometrial atrophy.

The “typical” menstrual cycle is 28 ± 7 days with menstrual flow lasting 4 ± 2 days and blood loss averaging 20 to 60 mL. By convention, the first day o vaginal bleeding is considered day 1 of the menstrual cycle. Growth hormone secretion by pituitary somatotropes is stimulated by hypothalamic growth hormone-releasing hormone (GHRH) and inhibited by somatostatin. GHRH is primarily secreted by the hypothalamus, but small quantities are released by placental and immune cells. Somatostatin is widely distributed in the CNS and in the placenta, pancreas, and gastrointestinal tract. One of the reasons of abnormal bleeding could be estrogen withdrawal is that which may follow bilateral oophorectomy during the follicular phase of the cycle. The bleeding that occurs after removal

of the ovaries can be delayed by exogenous estrogen therapy, but will occur when treatment stops. Other examples include cyclic estrogen-only hormone therapy in castrate or postmenopausal women and the midcycle bleeding. Other clinical case is estrogen breakdown bleeding, which is experienced by women with chronic anovulation. Relatively low levels of chronic estrogen exposure typically result in intermittent spotting or staining that is generally light in volume but may be prolonged. In contrast, sustained high level estrogen stimulation results in long intervals of amenorrhea punctuated by acute episodes of often profuse bleeding that vary in duration.

Progestogen withdrawal bleeding is observed when treatment with exogenous progesterone or a synthetic progestin is discontinued. Progestogen withdrawal bleeding usually occurs only when the endometrium has first been primed with endogenous or exogenous estrogen. The amount and duration of bleeding can vary widely and generally correlates with the level and duration of previous estrogen-stimulated endometrial proliferation. In those with high estrogen levels or long intervals of amenorrhea, bleeding can be heavy, but still is self-limited. Between the extremes, the amount and duration of bleeding induced by progestogen withdrawal is typically similar to that observed at the end of a normal ovulatory cycle. In women receiving cyclic hormone therapy with exogenous estrogen and progestin, bleeding follows withdrawal of progestin.

In women with AUB, sampling and histologic evaluation on the endometrium may identify infection or neoplastic lesions such as endometrial hyperplasia or cancer. Alterations in pulsatile gonadotropin-releasing hormone (GnRH) release may lead to a relative increase in luteinizing hormone (LH) versus follicle-stimulating hormone (FSH) biosynthesis and secretion. LH stimulates ovarian androgen production, while the relative paucity of FSH prevents adequate stimulation of aromatase activity within the granulosa cells, thereby decreasing androgen conversion to the potent estrogen estradiol. Unopposed estrogen stimulation of the endometrium may lead to endometrial hyperplasia.

Miscarriage, ectopic pregnancies may cause life-threatening hemorrhage. Pregnancy complications are quickly excluded with determination of urine or serum β -human chorionic gonadotropin (hCG) levels. This is typically obtained on all reproductive-aged women with a uterus.

Thus, dysfunctional uterine bleeding is a diagnosis made by exclusion. The differential diagnosis includes problems relating to pregnancy, infection, vaginal and cervical abnormalities, benign and malignant uterine neoplasia, coagulopathies, endocrine disorders, trauma, foreign bodies, systemic disease, and bleeding relating to medications. During the reproductive years, most abnormal bleeding results from anovulation, hormonal contraception, complications of pregnancy, infections, endocrine disorders, and polyps and myomas. Although abnormal bleeding is a relatively common problem in women using hormonal contraception or receiving continuous estrogen-progestin hormone therapy. Estrogen stimulation of the endometrium may lead to endometrial hyperplasia.

PROTEOLITIC SYSTEMS IN THE PATHOGENESIS OF BENIGN PROSTATIC HYPERPLASIA

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Relevance. Benign prostatic hyperplasia (BPH), benign prostatic enlargement (BPE) and lower urinary tract symptoms (LUTS) belong to the most frequent diseases in ageing men. Beyond the 6th decade of life, more than 30% of men suffer from moderate to severe LUTS requiring