Heavy Periods

Heavy periods, also known as Menorrhagia, is one of the most common gynecologic complaints. Clinically, menorrhagia is defined as total blood loss exceeding 80ml per cycle or periods lasting more than 7 days. More practically, menorrhagia is bleeding that is perceived as excessive, interferers with normal activities, is associated with bleeding accidents or social embarrassment. Commonly, women with menorrhagia are anemic or iron deficient.

Nearly 30% of all hysterectomies performed in the United States are performed to alleviate heavy menstrual bleeding. Modern gynecology has tended toward conservative therapy both for controlling costs and the desire of many women to preserve their uterus.

Causes

Etiologies of heavy menstruation are divided into 4 categories: organic, endocrinologic, anatomic and iatrogenic (from medication or medical treatments).

***Organic**: causes include infection, bleeding disorders and other body organ dysfunction.*

Infections can include simple vaginitis (eg, yeast or bacterial vaginosis), or Gonorrhea and Chlamydia.

Bleeding disorders often don't present until puberty with the onset of menstruation. Heavy periods may represent an underlying coagulopathy including von Willebrand disease,

factor II, V, VII, and IX deficiencies, prothromibin deficiency, idiopathic thrombocytopenia purpura (ITP), or thromboasthenia.

Organ dysfunction causing heavy periods include liver or kidney failure. Chronic Liver disease affects production of clotting factors and reduces hormone metabolism (estrogen). Either of these problems may lead to heavy menstrual bleeding.

Endocrine: *include disorders of the thyroid, adrenal gland, pituitary gland, anovulatory cycles (bleeding without ovulation), PCOS (Polycystic Ovarian Syndrome), and obesity.*

Both low thyroid (hypothyroidism) and high thyroid (hyperthyroidism) result in heavy periods in 20% of patients. The periods normalize with correction of the thyroid disorder.

Pituitary tumors producing a hormone called Prolactin interfere with the release of FSH and LH, the 2 pituitary hormones responsible for cycle regulation.

Anovulation (lack of ovulation) is the most common hormonal cause of heavy uterine bleeding. This is most common in adolescents and perimenopausal women.

PCOS hallmarks are: anovulation, irregular menses, obesity and hirsutism (male pattern hair growth and acne). Insulin resistance is common and increases androgen (male hormone) production by the ovaries. The anovulation and high estrogen levels leads to heavy uterine bleeding.

Obesity, similar to PCOS, results in high insulin levels, elevated androgens and high estrogen levels and subsequent anovualtion.

Anatomic. *Etiologies include uterine fibroids, endometrial polyps, adenomyosis, endometrial hyperplasia, endometrial cancer, and cervical cancer.*

Fibroids – Benign smooth muscle tumors of the uterus affecting one in for women over the age of 30. These tumors are produced in women with a genetic predisposition, usually passed through the female lineage. Fibroids grow only during the reproductive years and are stimulated to go by the natural production of estrogen and progesterone from the ovaries. Heavy bleeding from fibroids is due to effects on the endometrium (the glandular layer lining the inside cavity of the uterus). Fibroids may also cause a significant amount of pain and cramping. Fibroids may enlarge to the point that they outgrow their blood supply and undergo necrosis (cell death). This also causes a great deal of pain for patients.

Endometrial polyps – are glandular growths arising directly from the endometrial lining. The blood supply to the polyp is different compared to the surrounding endometrium and is thought to function independently resulting in bleeding problems.

Adenomyosis – is the growth of endometrial glands within the smooth muscle fibers of the uterus. These extra glands cause the uterus to enlarge and produce heavy, painful periods. Symptoms from adenomyosis are very similar to fibroids; heavy periods, painful periods and painful intercourse.

Endometrial Hyperplasia usually results from unopposed estrogen. This results in an abnormal thickening of the endometrial layer and can be associated with heavy vaginal bleeding. This condition usually arises in women who are anovulatory. Endometrial hyperplasia can lead to endometrial cancer in 1-2% of patients. After menopause, vaginal bleeding

is especially concerning for endometrial cancer. Women who use unopposed estrogen (without progesterone) have almost 3 times more risk to develop endometrial cancer than non users. Both endometrial cancer and cervical cancers cause abnormal, potentially heavy bleeding.

Iatrogenic causes of heavy periods include IUDs (particularly the ParaGard/copper IUD), steroid hormones, chemotherapy agents and medications (eg, anticoagulants).

Treatment

Treatment of heavy periods falls into two categories: Medical treatment and surgical treatment.

Medical Treatment. *Medical therapy for heavy periods is tailored to the individual. Factors taken into consideration include the patient's age, coexisting medical diseases, family history and desire for fertility. Medication cost and adverse effects are also considered because they play a role in compliance.*

Nonsteroidal anti-inflammatory drugs (NSAIDs) are the first line medical therapy. This class of medications includes Ibuprofen (Advil), Naprosyn (Aleve), and other prescription agents such as Ponstel. Studies show and average reduction of 20-40% in menstrual flow. NSAIDs are taken for only 5 days of the entire cycle limiting their most common adverse effect of stomach upset.

Oral contraceptive pills (OCPs) are a popular first-line therapy for women who also desire contraception. Decrease in blood loss is due to atrophy (thinning) of the endometrial lining.

OCPs prevent ovulation. Common adverse effects include breast tenderness, breakthrough bleeding, nausea and possibly, weight gain in some individuals.

Progestin therapy is the most frequently prescribed medicine for heavy periods. Progestins are synthetic progesterone like hormones. They work as an antiestrogen on endometrial lining keeping it thin. Common side effects include weight gain, headaches, water retention and depression.

Mirena IUD is an intrauterine device which locally releases progestin (Levonogestrel) to the endometrial lining. It effectively reduces menstrual blood loss by as much as 97%. This level of reduction in menstruation is equivalent to an endometrial ablation (surgical destruction of the endometrial lining). Additionally, this IUD provides effective contraception. Adverse effects of Mirena include irregular uterine bleeding or spotting, headache, ovarian cysts, vaginitis, painful periods, breast tenderness and acne.

Gonadotropin-releasing hormone agonists (Lupron) are agents used on a short term basis due to severe adverse effects and high costs. Lupron works by inhibiting the pituitary release of FSH and LH, effectively placing the patient into temporary medical menopause. Typical side effects are hot flashes, night sweats, vaginal dryness, loss of sexual desire, and bone loss.

Danazol is a synthetic androgen (male) hormone which usually stops menstruation within 4-6 weeks of starting the medication. Side effects of weight gain, acne, decreased breast size and infrequently, lowering of the voice, make this medication seldom used any longer.

Surgical Treatment. *Surgical treatment has been the standard of treatment for heavy periods due to organic causes (eg,*

fibroids, adenomyosis) when medical therapy fails to alleviate symptoms.

Dilatation and Curettage (D&C) – this procedure is primarily used for diagnostic purpose. It allows a sampling of the endometrium to evaluate for endometrial polyps, hyperplasia or cancer. It is not used for treatment because it provides only short-term relief, typically 1-2 months.

Endometrial Ablation(EA) – is a surgical procedure which destroys the endometrial lining in the uterus. This represents a viable option for women who have completed childbearing. It provides an alternative to hysterectomy usually with less risk of major and minor postoperative complications and shorter recovery than the traditional hysterectomy. Endometrial Ablation surgical options include; Hysteroscopic resection, Roller-ball, Endometrial laser ablation, Thermal balloon Ablation, Hydrothermal Ablation, Cryoablation, Microwave Endometrial Ablation, and Radiofrequency Electricity Ablation. The newer, non-resectoscopic techniques are safer and faster than the older techniques. The procedure most commonly performed in my office is the Hydrothermal Ablation with an 81% reduction in menstrual flow and 37% amenorrhea (absent menstruation) rate. The most common complication of EA is failure of the procedure to control heavy periods. Depending on the form of EA used, failure rates are approximately 10%.

Myomectomy – excision of fibroids from the uterus. This procedure is useful in women who wish to retain their uterus and/or fertility. Myomectomy can be performed hysteroscopically, laparoscopically, or by an abdominal incision (laparotomy). The approach would depend on number, size and location of the fibroids. Since myomectomy can be associated with large blood loss, the procedure is often reserved for cases of single or few myomas (fibroids). Risks include

recurrence of more fibroids in the future, blood loss, and depending on the type of myomectomy, uterine rupture in pregnancy, necessitating pregnancy be delivered by cesarean section rather than vaginally.

Hysterectomy – removal of the uterus. Hysterectomy is the definitive cure for heavy periods. Hysterectomy can be performed by many routes. The most common form of hysterectomy in the United States is an Abdominal Hysterectomy. This kind of hysterectomy is usually done through a "bikini" type incision, requires hospitalization for 2-3 days and a 4-8 week recovery. A vaginal hysterectomy is removal of the uterus vaginally, without abdominal incisions. Hospitalization and surgery recovery time is less but this approach can only be offered to a woman who has a uterus small enough, and vaginal room enough, to fit. The most common form of hysterectomy in my practice is a Laparoscopic Hysterectomy. This form of hysterectomy is performed through 3 or 4 tiny incisions. Hospitalization is usually less then 24 hours and recovery time is two weeks. Many hysterectomies can be performed as a subtotal (leaving the cervix in). This has the additional benefit of not displacing the bladder or detaching the supporting structures of the bladder and vagina. In order to qualify for this form of hysterectomy it is essential that the woman have normal pap smears, since the risk of cervical cancer has not been eliminated with a subtotal. Many women have the impression that performing a hysterectomy puts her into menopause. This is a common false impression, since hormone production and menopause are determined by ovarian function. If the ovaries are not removed with the hysterectomy then menopause does not occur at that time. The ovaries, with a separate blood supply from the uterus, will continue to function until the age of natural menopause, usually around 51. Complications of hysterectomy include risk of anesthesia, blood loss, infection and injury to surrounding organs. In a subtotal

hysterectomy, when the cervix and ovaries are kept in, there is a 5-10% risk of cyclic spotting/bleeding.

I hope this information letter has been helpful to you, a friend or another family member. Remember, our office strives to stay current with the most advanced medical and surgical approaches available.