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Menorrhagia

Introduction

The average menstrual loss is around 40 ml over three to seven days. Menorrhagia is the medical term for heavy or prolonged menstrual bleeding. Women who lose more than 80 ml of blood during one period are said to have Menorrhagia. However it is up to each woman to decide if her own menstrual loss is excessive. Considerations are the ability to maintain iron stores (as blood contains iron), the inconvenience of heavy periods and whether or not blood loss impacts upon other medical problems.

Causes of Menorrhagia

Broadly speaking, heavy periods may be caused by not ovulating every month (irregular or anovulation), abnormal growths in the uterus such as polyps or fibroids or conditions that increase bleeding throughout the body.

Anovulation

The normal menstrual cycle depends on a precise balance of oestrogen and progesterone. Oestrogen is the predominant hormone at the beginning of a menstrual cycle and is produced by the ovaries. This causes growth of the lining of the uterus (endometrium). After ovulation occurs in the middle of the month, the cyst from where ovulation occurs forms a corpus luteum, which produces progesterone. Progesterone causes solidification of the endometrium and accumulation of glycogen (sugar) with changes in blood vessels, in preparation for possible pregnancy. The first half of the cycle is relatively constant in length.

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The time of ovulation and whether or not ovulation occurs affects the second half of the cycle and the timing overall. Women who ovulate irregularly or not at all tend to have heavy periods and are predisposed to overgrowth at the endometrium.

Growths in the Uterus

Non-cancerous or cancerous growths in the uterus can cause heavy periods. The most common non-cancerous growths include endometrial polyps, which are a localized overgrowth of the endometrium, fibroids (see separate document on fibroids on this website), and overall overgrowth of the endometrium referred to as endometrial hyperplasia. In some cases this can lead to uterine cancer. The chance of this occurring is increased if you have diabetes, high blood pressure, are overweight and over 45 years of age.

Bleeding tendency

Certain bleeding conditions and medications that prolong bleeding time can also cause heavy menstrual bleeding. Examples include Von Willebrand's disease, haemophilia, low platelet count, and anticoagulants ("blood thinners") such as Warfarin. Aspirin, although active against platelets, does not cause heavy periods.

Symptoms

Women who soak through a pad or a tampon every one to three hours, have bleeding for more than seven days, need to use "double protection" (both pads and tampons together), need to change pads or tampons at night, flood at night, pass clots or those with iron deficiency anemia can all be objectively said to have excessively heavy periods. This may develop over a long period of time and often a women does not realise that she is iron deficient or suffering from excessively heavy periods.

Diagnosing the cause of menorrhagia in your case

It will be necessary to perform a physical examination including a pelvic examination, speculum examination, Pap smear and swabs. I will usually also order blood tests, to explore the extent, consequences and complications of heavy periods. Blood tests will assess bleeding disorders, especially in younger women, blood count or hemoglobin, and iron stores. Note that serum iron level is a short-term indicator of iron stores. A more long term and reliable indicator is ferritin level.

A pelvic ultrasound is also necessary to fully evaluate heavy or irregular menstrual bleeding, as this can assess the muscle of the uterus, ovaries and other structures within the pelvis and abdomen.

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Endometrial sampling (or curettage)

This is commonly called, and I don't like this term, a "clean out". Actually, a curette only samples a small amount of endometrium and is a diagnostic procedure rather than treatment. In the setting of a miscarriage, a curette can be helpful as it removes excessively thickened endometrial lining, but a diagnostic curette does not have a lasting effect.

Endometrial sampling is necessary to exclude overgrowth or precancerous change. This is preceded by hysteroscopy. Hysteroscopy involves the visual examination of the endometrium under anaesthetic (see other document on this website, Diagnostic Hysteroscopy and Curettage).

Treatment of menorrhagia

Treatment is determined by the cause of bleeding, the need for contraception or the desire to achieve a future pregnancy, the desire to preserve fertility and your preferences.

Oral Contraceptive Pill (OCP)

The OCP is an effective means of reducing menstrual bleeding when there is no physical cause for heavy bleeding present (i.e. dysfunctional uterine bleeding). The OCP can reduce period flow by around 50% and has the advantage of concurrent contraception. Period control is achieved by reducing the endometrial thickness and subtle effects on the body's blood clotting system. You may be able to take the OCP without a break in order to avoid periods for two of three months (so called tricycling). For practical purposes, this can only be achieved with monophasic or single dose pill such as Microgynon.

Mirena Intrauterine Device

The Mirena is one of the most important break-throughs in gynecological care in the last 20 years. There is no doubt that Mirena IUCD's have reduced the incidence of hysterectomy. A Mirena IUCD can reduce menstrual flow by about 90% and, over the course of 12 months post insertion, around 30% of women will experience complete menstrual suppression. This is achieved by thinning the endometrium and reducing the blood flow to the sub-endometrial myometrium. (Please refer to the separate Mirena document on this website. Also see www.mirena.com)

The World Health Organisation publishes a list of criteria for the perfect contraceptive, and Mirena is the only device to satisfy all its requirements. Although insertion in my rooms is possible in selected patients, insertion under GA (sleeping anaesthetic) is superior as hysteroscopy and curettage may be undertaken at the same time.

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Implanon

Implanon, or the progesterone containing subcutaneous rod, is also effective in reducing menstrual flow in much the same way as Mirena, although bleeding can remain irregular and in practice 40% of women have the rod removed in the first year for this reason.

Depo-Provera

Depo-Provera is injectable progesterone which lasts for three months. Again, it causes a rapid decrease in menstrual flow. Its side effects tend to be a little more intrusive and return to fertility also takes longer. This is a less practical option for long-term period control than the OCP or Mirena.

Anti-fibrinolytic medications

The principal example is Cyklokapron or Tranexamic acid. These very subtly changed the balance of the body's coagulation system, in favour of clots forming rather clots dissolving. This can reduce menstrual flow by around 50%, similar to the combined OCP. A past history of deep venous thrombosis is not a contraindication however a current DVT is. Large doses need to be taken, on approximately a six hourly basis. This treatment can be effective but in reality can turn out to be quite inconvenient as many tablets need to be taken, and there is no overall modification of the underlying problem. Side effects can include headaches, muscle cramps or occasional abdominal pain.

Non-steroidal anti-inflammatories (NSAID's)

Ponstan or mefenamic acid is the most commonly prescribed non-steroidal anti-inflammatory specifically for the treatment of heavy periods. However, other NSAID's such as Nurofen or Naprogesic may also be effective. These can reduce menstrual flow by about 50%, are not expensive and have few side effects. They may also reduce period pain. NSAID's can be taken in combination with any of the above treatments.

Oral progestagens/progesterone

The Progesterone contraceptive Microlut is not an effective way of controlling periods however other progestagens such as Provera (medroxyprogesterone acetate) and Primolut (norethisterone) are effective. As described above, Progesterone is intrinsically vital to controlling periods. Taking either norethisterone or medroxyprogesterone acetate will soon put a halt to menstrual bleeding although the dose range is very wide. However, upon ceasing this medication a period will follow. This is a normal physiological response.

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Patients are often confused about the length of time for which oral progesterone tablets can be taken. In time, they may cause thinning of the endometrium, which may lead to break-through bleeding. However, no harm is done! The only contraindication to progesterone therapy is that of a progesterone sensitive breast tumor. There is no effect on deep venous thrombosis risk.

Therefore, although progesterone tablets can be used in the short term to control heavy bleeding, they are best taken in a cyclical fashion. This is generally between days five and 25 of the menstrual cycle.

Surgical treatment for menorrhagia

Consider: Have you completed your family? If you have an operation, how sure do you need to be that it will improve you periods in a lasting fashion?

Endometrial Ablation

This is the term given to a surgical procedure that cauterizes the lining of the uterus. Its aim is to "burn" the endometrium through its regenerative layer, thereby permanently reducing menstrual flow. Further notes on this procedure can be found on this website. Generally speaking the 30/30/10 rules applies. In 30% of women zero periods result. In another 30%, periods are extremely light, and a further 30%, periods are rendered normal, and in 10%, little or no effect is attained. In reality it is generally possible to predict those 10% of patients. These ladies have large uteruses, fibroids or other structural reasons for heavy periods, which cannot readily be treated with endometrial ablation.

Endometrial ablations are typically done manually using a roller ball resectascope device. With the so called second-generation endometrial ablation devices, the procedure is more efficient and arguably more effective. The best of these devices, according to current evidence, is the Novasure device. These have limited availability in the public sector but are freely available in the private sector. The instrument itself is disposable and expensive.

Hysterectomy

When done well, and for appropriate reasons, hysterectomies have an extremely high satisfaction rate. It is worth remembering that, despite the success of Mirena, medical treatment and endometrial ablation, only a hysterectomy will guarantee complete cessation of menstrual flow on an enduring basis.

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Some women find the decision to have a hysterectomy extremely easy, some extremely hard and will try all other conservative treatments first.

The decision to proceed with hysterectomy rests entirely with the woman. I am happy to proceed directly to hysterectomy as a first line treatment for menorrhagia, in an appropriately informed patient, as this procedure still has its place and has a very high satisfaction rate.

When required, hysterectomy should be performed by either laparoscopic or vaginal method. There should be very few remaining indications for an abdominal hysterectomy

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