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Received: 26 June, 2019

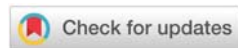
Accepted: 19 July, 2019

Published: 22 July, 2019

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<https://www.peertechz.com>

Keywords: Menstruation; Pain; Dysmenorrhea



Review Article

Menstrual pain

Abstract

Most women feel pain or discomfort before, as well as during the period, which is mostly caused by the contraction of the uterus to release the uterine plectet. The pain that slightly reminds of cramps is very common occurrence just before the period and usually lasts one or two days. It can feel in the pelvis, back, thighs or abdomen. Usually begins immediately under the navel and spreads to the thighs and backs. The intensity of these menstrual cramps differs from woman to woman.

versus irregular menses, or normal versus abnormal menses, are generally based on what is considered average and not necessarily typical for every woman. According to these standards, the normal menstrual cycle is 21 to 35 days with a menstrual flow lasting 4 to 6 days, although a flow for as few as 2 days or as many as 8 days is still considered normal.

The amount of menstrual flow varies, with the average being 50 mL; nevertheless, this volume may be as little as 20 mL or as much as 80 mL. Generally, women are not aware that anovulatory cycles and abnormal uterine bleeding are common after

Menstrual problems

Menstruation, the shedding of the lining of the womb, is one part of a cycle of physiological changes involving the hypothalamus, pituitary and ovaries as well as the uterus itself [2]. In western societies, most women experience menstruation for the first time between 10 and 16, and will have around 400 menstrual periods before the menopause. Despite the textbook description of a 'clockwork' 28-day menstrual cycle, only one in eight cycles is exactly 28 days long. In fact, although individual women tend to have their own menstrual patterns, menstrual cycles in general vary considerably both between women and across the lifetime of an individual woman, in terms of cycle length, the number of days on which menstruation occurs and the amount of blood and fluid lost during menstruation. This variability means that menstrual disorders are difficult to define, and epidemiological studies are problematic. However, menstrual disorders are among the ten most common complaints seen in primary care settings, and since many women do not seek help from physicians it is likely that large numbers of women experience menstrual problems at some time in their life, and that most of these women develop their own ways of coping with them.

Introduction

The initiation of menstruation, called menarche, usually happens between the ages of 12 and 15 [1]. Menstrual cycles typically continue to age 45 to 55, when menopause occurs. Many women find themselves reluctant to discuss the existence and normality of menstruation. The word menstruation has been replaced by a variety of euphemisms, such as the curse, my period, my monthly, my friend, the red flag, or on the rag.

Most women experience deviations from the average menstrual cycle during their reproductive years. As a result, it is not uncommon for women to display certain preoccupations regarding their menstrual bleeding, not only in relation to the regularity of its occurrence, but also in regard to the characteristics of the flow, such as volume, duration, and associated signs and symptoms. Unfortunately, society has encouraged the notion that a woman's normalcy is based on her ability to bear children. This misperception has understandably forced women to worry over the most miniscule changes in their menstrual cycles. Indeed, changes in menstruation are one of the most frequent reasons why women visit their clinician.

Menarche is the most readily evident external event that indicates the end of one developmental stage and the beginning of a new one. It is now believed that body composition is critically important in determining the onset of puberty and menstruation in young women. The ratio of total body weight to lean body weight is probably the most relevant factor, and individuals who are moderately obese (i.e., 20–30% above their ideal body weight) tend to have an earlier onset of menarche. Widely accepted standards for distinguishing what are regular

Menstrual complaints are common and concerning to women [3]. In a study of women referred to hospital-based gynecology clinics for menstrual issues, the top three complaints were pain with menstruation (33%), perimenstrual mood changes (32.8%), and increasing menstrual flow (29.1%); other concerns included prolonged menstruation (25.3%) and experiencing premenstrual pain (17.5%).

Menstrual problems present throughout the reproductive years and should be evaluated with care keeping in mind that women, especially adolescents, may present with this concern when other issues (e.g., undesired pregnancy, sexually transmitted infection [STI], or sexual assault) are the real reason for the visit. A careful history, respecting the privacy of the patient and addressing issues of confidentiality, will enable a patient to provide accurate answers and voice her concerns fully.

Dysmenorrhea affects up to 60% of menstruating women and can be mild or extremely debilitating. While premenstrual symptoms affect most women, premenstrual syndrome (PMS) is diagnosed in approximately 30% of women; premenstrual dysphoric disorder (PMDD) is the most severe form and uncommon. Abnormal uterine bleeding is a presenting complaint in 20% of primary care gynecology visits and accounts for approximately 25% of gynecologic procedures.

Pain

Gynaecological disorders presenting to the ED (Emergency Department) with abdominal pain may be difficult to distinguish from other disorders [4]. Obtain a full history of the pain: sudden onset of severe colicky pain follows ovarian torsion and acute vascular events; more insidious onset and continuous pain occur in infection and inflammation. Radiation of the pain into the back or legs suggests gynaecological origin. Other clues in the history include co-existing symptoms of vaginal discharge, vaginal bleeding, or missed last menstrual period (LMP).

Abdominal and pelvic pain in early pregnancy may be due to ectopic pregnancy or threatened abortion: both occur in patients who do not realize that they are pregnant or who deny the possibility of pregnancy due to embarrassment.

Growth of functional endometrial tissue in the pelvis outside the uterus may produce cysts and adhesions. Patients often present age \approx 30 years with dysmenorrhoea and menstrual problems, infertility and dyspareunia. Symptoms are usually chronic and recurrent in a cyclical fashion, and are appropriately followed up by the GP. Occasionally, an endometrial cyst may rupture and bleed severely into the pelvis, presenting in similar fashion to ruptured ectopic pregnancy. Resuscitate for hypovolaemia and refer urgently.

Triage ahead patients with severe bleeding or evidence of hypovolaemic shock. Resuscitate first (O_2 , cross-match and obtain Rhesus status, start IV fluids) and ask questions later. Most patients with vaginal bleeding, however, do not require resuscitation. Take a careful menstrual history and ask

about associated symptoms. Attempt to assess the amount of bleeding. Interpretation of a patient's description is notoriously difficult, but useful pointers are the presence of clots and the rate of tampon use. Always consider the possibility of pregnancy: remember that ruptured ectopic pregnancy can present before a period is missed. Examine for evidence of hypovolaemia and abdominal masses/tenderness. Depending upon the circumstances, speculum and bimanual vaginal examinations may be required: local policy will determine who should perform this.

Dysmenorrhea

The most common menstrual problem is dysmenorrhoea, or pain before and during menstruation [2]. In studies of non-patient populations as many as 70% of women report some pain associated with menstruation, and 5-10% regularly experience pain which is severe enough to be incapacitating for between an hour to three days each month. Other common complaints are excessive menstrual bleeding (menorrhagia), and absence of menstruation (amenorrhoea). Menorrhagia is usually defined as loss of over 50 ml of blood in one menstruation, a level which may put women at risk for anaemia, and approximately 5% of women between 30 and 49 will seek help from a doctor for it. There are many organic causes of menorrhagia, for example, uterine fibroids, thyroid dysfunction or intrauterine contraceptive devices. For as many as half of the women complaining of heavy periods, however, no organic cause can be found. Recent research suggests that some of these women may have inherited blood disorders. The most likely medical investigation is a D&C, followed by hormonal or surgical treatments, usually hysterectomy or endometrial ablation.

Dysmenorrhea means painful menstruation [5]. There are two types: primary dysmenorrhea, in which the pelvic organs are normal, and secondary dysmenorrhea, which results from various diseases of the pelvic organs, such as endometriosis.

Primary dysmenorrhea is the more common type. The pain is crampy, begins just prior to menstruation, and lasts for one or two days after onset of the menstrual flow. Usually, menstrual periods are painless for the first year or two after onset of menses during adolescence because early menstrual cycles are usually anovulatory, and primary dysmenorrhea does not occur unless ovulation occurs. Dysmenorrhea does not usually become a problem until regular ovulatory menstrual cycles are established.

Crampy menstrual pain is caused by a class of compounds called prostaglandins. Prostaglandins are synthesized within the endometrium under the influence of progesterone produced by the ovary during the secretory phase of the cycle. When the endometrium breaks down during menstruation, the prostaglandins are released and diffused into the myometrium, where they cause the spasmodic myometrial contractions that are responsible for the crampy menstrual pain. Dysmenorrhea does not occur if cycles are anovulatory because no corpus luteum forms and no progesterone is produced to stimulate prostaglandin synthesis.

Dysmenorrhoea is the leading cause of lost school and work time, suggesting the impact of menstrual disorders is substantial and probably largely unrecognized [6]. Some groups of menstrual cycle syndromes are termed catamenial disorders, (coming from peri or around menses) and these involve numerous bodily systems and organs associated with the menstrual cycle. Because of the diversity of systems affected, a comparable number of disciplines have been involved with referrals for treatment or assessment or both. It is surprising that little health psychological research has been carried out to delineate the impact of, for example, dysmenorrhoea on quality of life, coping and health - care - and treatment - seeking behaviours. Health - care professionals' attitudes to menstrual cycle dysfunctions traditionally attributed psychological aetiologies to these. Although treatment in the twenty - first century has improved, more can be done to acknowledge problems earlier through health education and appropriate treatments.

Different phases of the menstrual cycle can be responsible for increasing existing medical conditions such as menstrual migraine, asthma, rheumatoid arthritis, irritable bowel syndrome, epilepsy and diabetes. The rapid changes in ovarian hormones around ovulation and premenstrually may account for some of these menstrual cycle - related changes within existing medical conditions. Treatment using gonadotropin - releasing hormone agonists to suppress ovulation has been shown to be useful.

Conclusion

Moderate pain and cramps during menstruation are common occurrences. However, excessive and very severe pain that prevents everyday activities is not a normal occurrence. The medical term for painful menstruation is dysmenorrhea. Primary dysmenorrhea occurs in women who experience pain before and during menstruation. Women with normal menstruation that later become very painful have secondary dysmenorrhea.

Dysmenorrhoea is a gynecological health condition characterized by menstrual pain that hampers daily activities. Dysmenorrhoea is often defined simply as menstrual pain, or intensively menstrual pain. This is also used as a synonym for menstrual cramps, but they may also relate to menstrual cervix contractions, which are usually greater in strength, duration, and frequency compared to the rest of the menstrual cycle. Dysmenorrhoea may involve various types of pain, and may also precede menstruation for several days or occur during menstruation. Excessive bleeding can also occur with dysmenorrhoea, known as menorrhagia.

It is believed that the pain is caused by the severe cramping of the uterine (myometrium) and ischemia - reduced oxygen supply, conditioned by the release of chemical messengers of prostaglandins. These substances are normally produced

in the uterine mucosa (endometrics) and cause uterine contractions. Risk factors for the more pronounced symptoms of painful menstruation are early age of the first menstruation (menarche), long or abnormal menstrual bleeding, women who have not given birth (nullity), smoking, dysmenorrhoea in family history and absence of exercise. The main symptom of dysmenorrhoea is pain concentrated in the lower abdominal area, in the area of the navel or the suprapubic region of the abdomen. Also, pain can be felt in the right or left part of the abdomen, ie the thighs and lower back. Symptoms that often occur with menstrual cramps include: nausea and vomiting, diarrhea or constipation, headache, dizziness and disorientation, hypersensitivity to the sound, light, smell and touch, dizziness and fatigue. Symptoms of diarrhea often begin immediately after ovulation and last until the end of menstruation. This is because dysmenorrhoea is often associated with changes in hormone levels in the ovulation.

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Citation: (2019) Menstrual pain. J Gynecol Res Obstet 5(2): 031-033. DOI: <http://dx.doi.org/10.17352/jgro.000067>