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Case Report

Severe Uterine Bleeding

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Introduction

Apgar et al. (2007) defined Menorrhagia as menstrual blood loss of C80 mL per cycle [1]. The current recommendation is to replace the term 'menorrhagia' by 'heavy menstrual bleeding' (HMB), as the former term is confusing with Latin and Greek roots which are loosely defined in the English medical language. In addition, the 80-mL criterion is of limited clinical prognostic value. HMB is a universal health problem affecting up to 30% of women in reproductive age and negatively impacting their physical activities and health-related quality of life. The National Institute for Clinical Excellence in the UK defines HMB as "excessive menstrual blood loss that interferes with the woman's physical, emotional, social, and/or material quality of life". Idiopathic HMB is regular heavy bleeding in the absence of recognizable pelvic pathology or a general bleeding disorder. Fibroids have been found in up to 40% of women with HMB; however, half of all women having a hysterectomy for HMB are found to have a normal uterus. There are data suggesting that unrestrained local inflammatory events and/or deficient repair processes within the endometrium may contribute to the onset of HMB. Accordingly, medical therapy, e.g., non-steroidal anti-inflammatory drugs, antifibrinolytics, oral contraceptive pills, progestogens and other hormones, and levonorgestrel-releasing intrauterine system represents an attractive option to avoid unnecessary surgery (e.g., uterine ablation and hysterectomy).

Stemler (2004) states that menorrhagia is a common condition. Approximately 5% of females seek medical attention for it [2]. Menorrhagia is defined as cyclic menstrual bleeding producing more than 80 mL of blood and/or bleeding for more than seven consecutive days. Most individuals cannot accurately quantify the amount of menstrual bleeding in milliliters. Therefore, it is often helpful to ask the patient how the menses is disrupting her lifestyle. Most women have a consistent pattern of menstrual bleeding from month to month. When an excessive amount of

bleeding is present during the expected menstrual cycle, an underlying organic or hematologic etiology must be considered. Since the definition of heavy menstrual bleeding varies, it is important to have guidelines for it. A normal menstrual pattern occurs every 21 to 35 days and lasts from two to seven days. Women lose approximately 30 to 40 cc of blood each cycle, which represents eight soaked pads or tampons per menses.

Byams (2007) defines menorrhagia or excessive menstrual bleeding as a common clinical problem that affects 8–10% of women of reproductive age [3]. Because menorrhagia has many physical causes, including uterine fibroids, endometriosis, thyroid problems, and cancer, physicians traditionally focus on the organic pathology of the uterus. However, one study showed that a cause for menorrhagia is never identified in approximately 50% of cases.³ The results of recent studies indicate that between 5% and 24% of women with menorrhagia may have undiagnosed von Willebrand disease (VWD), and as many as 2 million women in the United States may have either VWD or another type of bleeding disorder without knowing it. VWD is the most common bleeding disorder, affecting just over 1% of the general population. It is caused by a deficiency in the body's ability to make a protein, von Willebrand factor, which localizes platelets to the site of bleeding and helps blood clot. Although VWD occurs with equal frequency among men and women, women are more likely to experience symptoms of VWD because of the increased bleeding it causes during their menstrual periods, during pregnancy, and after childbirth. Women with menorrhagia or VWD or both are at an increased risk for pain during menstruation, anemia, hospitalizations, blood transfusions, limitations in daily activities, time lost from work or school, adverse psychosocial effects, and a reduced quality of life (QOL). The results of a recent study showed that women with VWD reported poorer health-related QOL than women in the general population.⁶ Women with menorrhagia often undergo unnecessary surgical interventions

to relieve heavy menstrual bleeding. At least 60% of women with uncontrolled menorrhagia undergo hysterectomies or other surgical procedures, including endometrial ablation and dilation and curettage. With proper diagnoses, many women with bleeding disorders could avoid these complications and surgeries, decrease their level of menstrual bleeding, and improve their QOL. The Division of Blood Disorders (DBD) at the

Centers for Disease Control and Prevention (CDC) has worked to assess physicians' awareness of bleeding disorders, determine the prevalence of bleeding disorders among women, and evaluate the options for treating women with these disorders. Descriptions of some of the DBD's activities within their Women with Bleeding Disorders program follow (Table 1)

Differential Diagnosis	
anticoagulants, nonsteroidal antiinflammatory	Infection: chlamydia/gonorrhea/Incomplete abortion
contraceptive, acetylsalicylic acid,	Trauma/sexual abuse
sepsis, leukemia, aplastic anemia,	Trichomonas
thrombocytopenia, idiopathic	Pregnancy/ectopic pregnancy/
Willebrand disease, liver disease,	Trophoblastic disease/spontaneous
polycystic ovarian syndrome	Trauma/sexual abuse
Foreign body	
Medication induced:	

Treatment

For AZ, desmopressin acetate (DDAVP) nasal spray (Stimate) was chosen to help control her menorrhagia. Desmopressin acetate is the treatment of choice for vWD Type 1.^{13,36} Desmopressin may be given intravenously or intranasally, but the intranasal spray is equally efficacious and more convenient.³⁶ Patients should also use desmopressin acetate prophylactically before minor outpatient gynecological surgeries, as well as for other mucosal or dental procedures. Desmopressin acetate promotes the release of normal functioning vWF from the blood vessel's endothelial cell lining. It strengthens hemostasis by decreasing the bleeding time and increasing the levels of factor VIII and the (Abu, 2013) [4] .

Frazer et al., 2011, stated that both surgical and medical interventions are available for the treatment of heavy menstrual bleeding [5]. Treatments include the levonorgestrel-releasing intrauterine system (LNG-IUS), tranexamic acid, non-steroidal anti-inflammatory drugs, danazol, cyclical progestogens, and combined oral contraceptives (COCs). With the exception of the LNG-IUS, cyclical progestogens, and tranexamic acid, most medical treatments are prescribed off-label and without perspective, well-designed studies that validate or quantify their effect. Although COCs are used widely off-label for the treatment of heavy or prolonged menstrual bleeding, prior to 2009, no large-scale objective, randomised or placebo-controlled data existed in the literature to support their use for this purpose ⁶, with only one small randomised trial reported. Surgical procedures, such as hysterectomy and

endometrial ablation, offer effective strategies, but their cost and associated morbidity should limit these approaches to patients with whom medical therapies have failed. A novel and effective oral contraceptive containing estradiol valerate and dienogest (E 2V/DNG) have been shown to be associated with good cycle control and a good tolerability profile. This oral contraceptive has been available since May 2009 in many countries worldwide under the trade names Qlaira[®] or Natazia TM. Recently, two identically designed Phase III trials, one conducted in Europe and Australia and the other in North America, were undertaken to evaluate the efficacy and safety of E 2V/DNG in the treatment of heavy and/or prolonged menstrual bleeding. This paper details the reduction in MBL and safety findings as well as the patients' and investigators' rating of the improvement in bleeding symptoms from an analysis of pooled data from these two Phase III clinical trials. By pooling data from the available studies, we sought to better define the decrease in MBL achieved with E 2V/DNG and its safety profile across a larger and more diverse population of women. A pooled analysis of these trials was judged to be appropriate because of their identical design and enrollment criteria.

Patient Education

After AZ's condition was diagnosed, her NP made sure she was thoroughly educated about vWD. She was instructed to report any breakthrough bleeding or irregular menses. Women with vWD have heavier menses. If menstrual bleeding occurs at other times, then another source must be ruled out. AZ was instructed to report headaches, muscle weakness, nausea, vomiting,

and seizures because these can be signs of hyponatremia. The patient must avoid aspirin as well as nonsteroidal anti-inflammatory drugs due to the risk of further defects in platelet function. AZ was instructed to inform all providers of her new diagnosis of vWD, especially before surgical procedures to the mucous membranes (mouth, nose, and throat). The patient should be taught the important factors to consider, which include her age, whether her family is complete, contraceptive requirements, the severity of her symptoms, and the patient's culture and beliefs. Troublesome periods are a common problem, and nurses are likely to encounter women with them during the course of their practice, irrespective of whether they work in women's health or gynecology. It is important to encourage women to describe their symptoms by establishing an open, accepting relationship, taking time, and asking the correct questions. It is also important for nurses to have a clear understanding of the normal menstrual function and blood clotting so that they can identify possible abnormalities that merit further investigation. Today much more can be done to relieve the symptoms of menorrhagia. Women do not need to endure heavy, painful bleeding, and they may need sympathetic support to encourage them to access what is available and select the best treatment to suit their particular circumstances (Gould, 2007) [6].

Implications for practice

These findings suggest that more effort may have to be made by the GP to understand the woman's concerns and expectations regarding her menstrual symptoms and to explain the nature of bodily functions and likely causes of these symptoms. Women must be able to feel first that they have been listened to and then diagnosed so that treatment options can then be properly discussed, and a shared management decision reached. Menorrhagia may be seen to represent an exemplary of other problems that also cannot be objectively diagnosed, such as irritable bowel syndrome and chronic lower back pain that is presented in primary care and which GPs may be insufficiently skilled in managing. The place for a decision aid to assist both the GP and the woman with menorrhagia needs careful but urgent evaluation.

Directions of Future Research

Although researchers have made much progress in establishing the prevalence of bleeding disorders among women and evaluating the management options available to them and their physicians, DBD remains committed to expanding research in the area of women with bleeding disorders. DBD and its partners are currently developing a surveillance instrument to assess the prevalence of various problems among women and girls with diagnosed bleeding disorders who are receiving care at a network of federally funded hemophilia treatment centers (HTCs). HTCs were originally created to treat males with hemophilia; however, the number of females with

bleeding problems seeking care at these centers has increased steadily over the last 10 years from 4800 to almost 9000. The main purpose of this data collection is to better characterize reproductive and other symptoms among women with blood disorders over time. DBD will also collect data on diagnoses, treatments, HTC referral patterns, and study participants' QOL. Although menorrhagia is highly prevalent among women with bleeding disorders, it is not the only gynecological manifestation of these conditions: bleeding disorders have also been associated with an increased risk for ovarian cysts, endometriosis, fibroids, miscarriage, bleeding during pregnancy, and postpartum hemorrhage. However, because few prospective, casecontrol studies have compared the prevalence of these conditions among women with bleeding disorders with the prevalence among controls, a causal relationship has not been established. DBD plans to expand its research in order to elucidate the association between bleeding disorders and women's risks for various adverse obstetrical and gynecological outcomes. The ultimate goals of the DBD Women with Bleeding Disorders program are to improve women's QOL through the recognition, proper diagnosis, and management of bleeding disorders, reduce unnecessary surgical procedures among women with these disorders, and contribute to the development of a national protocol for the diagnosis, treatment, and management of bleeding disorders among women. Through the current and future activities described here, the program is making substantial progress toward meeting these goals as well as in supporting its mission to prevent and reduce morbidity associated with bleeding disorders among women (Hurskainen et al., 2004) [7-10].

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