

Bleeding Disorders in Women

*Gynecologic and Psychosocial Issues**

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The author assesses the impact of chronic hemorrhagic disorders on both the body and the psyche, based on information given by female patients who suffer from these conditions.

Women who present with unexplained bruising, menorrhagia, and/or postpartum or postsurgical bleeding are typically treated with hormone therapy or surgery. Because some physicians may not perform a full diagnostic work-up before treating the excessive bleeding, they may overlook the possibility of a coagulopathy. This article explains the nature, prevalence, and signs of the most common bleeding disorders. It also presents the results of the author's survey of afflicted women, who describe their experiences with the medical community, as well as various aspects of their diagnosis and treatment.¹ The author stresses the importance of diagnostic testing, and offers suggestions for helping women to cope with their disease.

MAJOR BLEEDING DISORDERS

Hemophilia

A genetic blood-clotting disorder, hemophilia involves a deficiency in one of the coagulation factors needed to form a fibrin clot. This results in an increased tendency to bleed easily and frequently. The disorder is considered sex-linked because the X chromosome carries the mutant gene responsible for the de-

ficiency in coagulation Factor VIII (classic hemophilia) or Factor IX.

Hemophilia is rare in females, as both X chromosomes have to carry the defective clotting-factor gene for the disease to manifest itself. In some cases, the disease may develop if only one X chromosome carries the mutant clotting-factor gene and one of two conditions is present: The corresponding gene on the other X chromosome is faulty in a different way, resulting in a low production of clotting factor; or the "normal" X chromosome is inactivated *in utero* (called lyonization), causing the amount of clotting factor produced to be relatively low. Women who have the hemophilia gene on one X chromosome (the gene on the other X chromosome is structurally and functionally normal) are carriers and do not have hemophilia *per se*. However, as compared with the normal population of women, they are at greater risk for excessive bleeding during trauma or menstruation.^{2,3}

Von Willebrand's Disease

The most common cause of lifelong bleeding problems in women is von Willebrand's disease (vWd), which was first described by Dr Erik von Willebrand in 1926. He reported on

a young girl who had experienced extensive bleeding during childhood.⁴ Originally called pseudo-hemophilia, vWd affects 1 to 3 of every 100 persons (males and females). The transmission of the disease is autosomal dominant. Although vWd is an inherited bleeding disorder in most cases, it can develop later in life as a result of a condition such as hypothyroidism.^{5,6} Symptoms include easy bruising, bleeding from mucous membranes (e.g., mouth, nose, gastrointestinal tract, uterus), and excessive bleeding after surgery or dental work.

PREVALENCE

The proportion of women who have bleeding disorders is not known.^{2,7} Even though these women often present to their physicians with symptoms such as bruising and menorrhagia, many cases go undiagnosed or misdiagnosed. Lusher noted that bleeding disorders are the underlying cause of menorrhagia in 9% to 11% of women; this proportion may rise to 45% in adolescent girls at menarche.⁸ At an annual meeting of the American College of Obstetricians and Gynecologists, Lusher argued that some physicians are so focused on the obstetric or gynecologic cause of

BLEEDING DISORDERS

Table 1. Author's Survey: Demographic Data

	Von Willebrand's Disease (%)	Other Bleeding Disorders (%)	Total (%)
Bleeding disorder	69.8	30.2*	100
Marital status			
Married	46.9	15.6	62.5
Divorced/separated	12.5	4.2	16.7
Single	9.4	8.3	17.7
Widowed	1.0	2.1	3.1
Race			
White	63.8	28.8	92.6
Asian	1.1	1.1	2.1
Native American	2.1	0.0	2.1
Black	1.1	0.0	1.1
Hispanic	1.1	0.0	1.1
Mixed	0.0	1.1	1.1
Education			
Some high school	2.2	2.2	4.3
High school graduate	10.6	4.3	4.9
Some college	22.3	13.9	36.2
College graduate	17.0	4.3	21.3
Some graduate work	4.3	3.1	7.4
Master's degree	11.7	3.2	14.9
PhD	1.5	0.0	1.5

Note: These percentage values (rounded to the nearest tenth) are based on the respondents' replies; not all of the diagnoses have been verified. In addition, many respondents—although examined by an OB/GYN, internist, or general practitioner—were not seen at a hemophilia treatment center. The mean ages for patients with von Willebrand's disease and for those with other bleeding disorders were 41.7 and 42.2 years, respectively.

*Includes deficiency in Factor I, V, VII, VIII, or IX; "free bleeders"; and symptomatic carriers.

abnormal bleeding that they neglect to test their patients for vWd. A survey of gynecologists in Georgia that was conducted by the Centers for Disease Control and Prevention found that these physicians suspected a bleeding disorder in only 1% of the women who presented with menorrhagia.⁹

The lack of an appropriate diagnosis of a bleeding disorder can lead to serious medical complications

ranging from debilitating midcycle menstrual pain and anemia to early, unnecessary hysterectomy and death.^{2,9,10}

THE SURVEY

Methods

Since April 1996, the author has been communicating with women suffering from bleeding disorders. Contact has been made via her Web

site, various Internet bulletin boards (e.g., Hemophilia Support), advertisements about the project in magazines geared specifically to the hemophilia community (e.g., *Belongings*, *Hemolog*), hemophilia chapter newsletters around the country, hemophilia conferences, and word of mouth. The primary objective was to learn about the gynecologic and psychosocial issues that women with bleeding disorders confront, from their own perspective. A secondary objective was to correlate their responses with findings in the literature.

To date, 94 completed questionnaires have been analyzed using the Statistical Package for the Social Sciences. More than two-thirds of the respondents had vWd; the remainder had another type of bleeding disorder such as Factor I, V, VII, VIII, or IX deficiency or were considered to be "free bleeders" or symptomatic carriers (Table 1).

Initial Bleeding Episode

Most respondents (63%) reported that their first bleeding episode occurred by the age of 10; 43% narrowed this time frame to age 5. A small minority (8.6%) were told that their bleeding began at birth, in the form of a hematoma (arising from head trauma caused by forceps delivery) or hemorrhage (following cutting of the umbilical cord).

Some women reported that they first suspected that they had some type of bleeding problem after they underwent surgical procedures

Table 2. Author's Survey: Data on Diagnosis and Referral

	Von Willebrand's Disease	Other Bleeding Disorders	Mean or Total
Mean age at first bleeding episode (y)	9.3	9.3	9.3
Mean age at diagnosis (y)	26.8	20.9	25.1
Mean interval between first bleeding episode and diagnosis (y)	17.5	11.6	15.8
Proportion having at least one child diagnosed with a bleeding disorder (%)	52.1	16.7	68.8
Proportion having at least one family member diagnosed with a bleeding disorder (%)	43.8	20.8	64.6
Proportion seen at a hemophilia treatment center (%)	42.4	16.3	58.7
Mean age when first seen at a hemophilia treatment center (y)	31.0	23.1	28.6

such as a tonsillectomy, deviated septum repair, appendectomy, or tooth extraction. One respondent, who had bled extensively during a tonsillectomy (she had not been diagnosed with a bleeding disorder until afterward), reported that her sister had died of uncontrolled bleeding during a tonsillectomy at the age of 7. Another woman's bleeding disorder manifested itself

their first bleeding episode did not render a diagnosis at that time. Even though they might have presented with severe bleeding as a child, with menorrhagia as a teenager, or with intra- and/or postpartum bleeding that required a transfusion, they were not diagnosed with a bleeding disorder until later on. For the sample, the mean age at diagnosis was 25.1 years (Table 2). Thus, the typical respondent had experienced bleeding problems for about 16 years before being referred to a physician who diagnosed the disorder and provided proper treatment. VWd was diagnosed at a relatively later age (mean, 26.8 y) than the other types of bleeding disorders (mean,

more than half of the women reported having children (68.8%) and/or other family members (64.6%) with some type of bleeding disorder. Research findings support the importance of testing for a bleeding disorder in women who present with a positive family history, menorrhagia, or abnormal bleeding during or after childbirth.^{11,12}

The vast majority of respondents were not referred to a hemophilia treatment center after their first bleeding episode, and only 58.7% ever received treatment at such a center (mean age at first visit, 28.6 y). Furthermore, the respondents received little, if any, information from their doctors about their bleeding disorders (unless the physician was associated with a hemophilia treatment center). In order to learn more about their disease, the patients or, in some cases, their parents usually had to gather the information on their own.

Puberty and Menarche

The women in this survey began menstruating between the ages

A diagnostic work-up should be done before treating the excessive bleeding.

as uncontrollable epistaxis that occurred either spontaneously or as a result of being hit in the face.

Diagnosis

Many respondents reported that the physician whom they consulted for

20.9 y), so the number of years between the first bleeding episode and the diagnosis was even longer for women with vWd (17.5 y) than for those with other bleeding disorders (11.6 y). The delay in diagnosis is particularly surprising because

Table 3. Author's Survey: Gynecologic Findings

	Von Willebrand's Disease	Other Bleeding Disorders	Mean or Total
Mean age at menarche (y)	12.3	12.5	12.4
Mean duration of menstrual bleeding per cycle (d)	9.8	11.0	10.2
Mean interval between cycles (d)	23.6	23.9	23.7
Gynecologic procedures (%)			
Laparoscopy	19.8	5.5	25.3
Uterine ablation	1.1	1.1	2.2
Dilatation and curettage	33.3	12.2	45.5
Hysterectomy	28.9	13.3	42.2

of 8 and 16; the mean age was 12.4 years (Table 3). They described menstrual periods that were unusually long, frequent, and heavy, and that worsened as time passed. The duration of bleeding ranged from 3 to 45 days per cycle (mean, 10.2 d). The length of time between periods ranged from 2 to 60 days (mean, 23.7 d).

Menorrhagia

A study conducted on women who presented with menorrhagia (but had normal findings on pelvic examination) showed that 17% had genetic bleeding disorders.¹¹ The researchers also noted that 65% of the women who were eventually diagnosed with vWd and 67% of those who were diagnosed with Factor VIII deficiency had experienced menorrhagia since the onset of menstruation.

Other studies have also found menorrhagia to be a common problem among women with a bleeding disorder.^{2,9,10,13} Thus, in women who present with menorrhagia, it is important to test for bleeding disorders—especially vWd—before

invasive procedures are done. The physician should not assume that women know the parameters of a “normal” period in terms of age of onset, duration of blood loss, amount of blood loss, or length of time between periods. Kouides et al found that many patients with vWd—even those with severe iron deficiency resulting from menorrhagia—did not regard their periods as heavy, despite having to use numerous tampons and pads for each period and frequently staining their clothing.² In fact, these patients thought that their bleeding was normal because their mothers had experienced similar bleeding problems.

Psychological issues. Virtually all respondents experienced episodes of social embarrassment because of their heavy menstrual bleeding. These experiences—along with the fear of bleeding through their clothing while they were out in public—often kept them home from school or work. Many respondents also mentioned their poor self-image, low self-esteem, and feelings of powerlessness related to their dis-

ease. This despondency was compounded by the sense that many health care professionals whom they encountered denied that women could have a bleeding disorder.

The adverse effects of menorrhagia on quality of life have been documented. A study conducted on 99 patients with type 1 vWd and on 150 menstruating women with normal coagulation values showed that those with vWd had experienced a substantial diminution in their quality of life because of their menstrual periods.¹⁴ Nearly two-thirds of vWd sufferers reported that menstruation had adversely affected their family activities, ability to enjoy life, ability to sleep, moods, and overall quality of life, and that they had lost time from school or work because of it. Other studies have suggested that the quality of life for women with a bleeding disorder is poor; some women even showed signs of an anxiety disorder as a direct result of excessive bleeding.^{15,16} Studies have also demonstrated the adverse impact of abnormal bleeding on the psychological well-being of women with bleeding disorders.^{17,18}

Continued on page 41

Continued from page 38

Table 4. Web Sites**Hemophilia Web Sites**

- National Hemophilia Foundation:
www.infonhf.org
- Hemophilia Home Page:
www.web-depot.com/hemophilia
- World Federation of Hemophilia:
www.wfh.org

The Author's Web Site

- www.unk.edu/departments/sociology/wysocki

Psychosexual issues. The psychological issues mentioned above (e.g., low self-esteem) can have a direct adverse impact on a woman's sexuality. Also, many respondents reported experiencing vaginal tearing or bleeding and/or uterine bleeding as a direct result of penetration during sexual intercourse. Furthermore, many of the women who underwent hysterectomy/oophorectomy because of menorrhagia experienced a thinning of the vaginal wall, which, in turn, increased the risk of vaginal tearing/bleeding during intercourse. A few respondents whose physicians prescribed intranasal desmopressin for "bleeds" or for menorrhagia (desmopressin, a synthetic analog of vasopressin, is the mainstay of therapy for menorrhagia in patients with vWd) said that they also used this drug before or after intercourse, depending on the severity of their symptoms.

Additional research data regarding specific sexual problems in women with bleeding disorders are lacking. Although some physicians might have difficulty talking about sexual issues with their patients or may be unaware that bleeding disorders can

jeopardize their patients' sexual well-being, it is important to understand these problems in order to help women solve them.^{19,20}

Treatment. Many physicians prescribe oral contraceptives (OCs) to reduce menstrual flow in women with menorrhagia. However, the efficacy of OCs for this indication varies. Coulter et al conducted a study on 348 patients with menorrhagia: 201 (58%) received drug therapy, 132 (38%) underwent surgery (hysterectomy or endometrial resection), and 15 (4%) had no active treatment.¹⁵ The patients who received drug therapy did not experience significant quality-of-life benefits. Furthermore, dissatisfaction with treatment was over 4 times more likely in patients who did not undergo surgery than in those who did (21% vs 5%). Similarly, Kouides et al found failure rates of 76% in standard-dose OC users and 63% in high-dose OC users.¹⁴ The usefulness of OCs in easing menorrhagia varied among the author's survey respondents. Some of them reported little change, others reported benefits, and still others reported that the OCs lessened their bleeding problems but produced side effects ranging in severity from manageable (e.g., excessive weight gain, mood swings, edema) to dangerous (e.g., thrombophlebitis).

When OCs do not suffice, the next step is often a dilatation and curettage (D&C). Almost half of the respondents in the author's sample had undergone D&Cs. One respondent underwent six D&Cs for abnormal bleeding but was not

tested for a coagulation disorder until she underwent a hysterectomy. In the study by Kouides and colleagues, 17 of 99 patients being treated at a hemophilia treatment center underwent D&Cs to stop heavy bleeding.¹⁴

The most common surgical procedure used to control abnormal menstrual bleeding in women is the hysterectomy.^{19,21} Studies conducted on women with bleeding disorders who were seen at hemophilia treatment centers reported hysterectomy rates of 9%,¹³ 13%,¹⁴ and 25%.⁹ Among the author's survey respondents, 42% (29% with vWd; 13% with other bleeding disorders) had already undergone a hysterectomy—sometimes when they were as young as 18. Other respondents who had not had a hysterectomy were advised by their physicians to consider having the procedure performed to stop their uncontrollable

Bleeding disorders are the underlying cause of menorrhagia in 9% to 11% of women.

bleeding. One respondent stated that she had a hysterectomy at age 40 because she almost bled to death. Another reported that she underwent three D&Cs for menorrhagia, six laparoscopies for abdominal pain, and a hysterectomy at age 23 to "save my life" after bleeding. Nine months after the hysterectomy, she underwent abdominal surgery because of large hematomas, blood clots, and hemorrhaging. This

woman was not diagnosed with a bleeding disorder until she was 28 years old and was never referred to a hemophilia treatment center.

CONCLUSION

Since starting this survey, the author has heard from hundreds of female patients with bleeding disorders (or their parents, in the case of younger girls), as well as from hemophilia treatment center personnel, hemophilia society members, and even researchers who are investigating bleeding disorders in women. Increased awareness on the part of OB/GYNs about the prevalence, manifestations, and management of these disorders will reduce morbidity from undiagnosed, untreated conditions. Physicians should also be able to reassure patients who have been told that "women don't have bleeding disorders" that they are not "crazy," and that they are not alone. Patients' sense of isolation will diminish if they communicate with other women who have similar problems.²² Contact can be made via the Web sites listed in Table 4. TFP

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**Last month, THE FEMALE PATIENT® presented an article on the recognition and management of von Willebrand's disease, the most common of all inherited bleeding disorders in women.*