Case Report

Extreme Anemia (Hemoglobin 1.8 g/dL) Secondary to Abnormal Uterine Bleeding

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We present the case of a 39-year-old G5P5 woman who presented to the emergency department with complaints of shortness of breath, lightheadedness, and excessive uterine bleeding for 14 days, with a heart rate of 123 and a blood pressure of 137/65. Menses had been heavy for several months. A hemoglobin of 1.8 g/dL was discovered. An ultrasound revealed an 11.8 cm fibroid uterus, and the patient was transfused with 6 units of blood and placed on oral contraceptive pills.

1. Introduction

Uterine fibroids or leiomyomas are the commonest benign tumors amongst women, and, by 50 years of age, almost 70% of white women and more than 80% of black women will have one or more fibroids [1]. They are monoclonal tumors of the smooth muscle cells of the uterus, consisting of extracellular matrix and containing a mix of collagen, fibronectin, and proteoglycan [2, 3]. There is evidence to suggest that growth of the tumor is accelerated by the hormones progesterone and estrogen; they rarely occur prior to menarche and, after the menopause, they regress [3–6]. Fibroids cause functional disturbance of the uterus and severe symptoms, including excessive uterine bleeding, anemia, pelvic pain, and urinary incontinence, which manifest in 15–30% of women [1]. This is the first reported case in the published literature of an ambulatory patient with a hemoglobin value of 1.8 g/dL due to uterine fibroids.

2. Case Report

A 39-year-old G5P5 woman presented to the emergency department with complaints of shortness of breath, lightheadedness, and excessive uterine bleeding for 14 days, with a heart rate of 123 and a blood pressure of 137/65. She had been soaking 3 pads/hour, wearing 4 pads at once. Menses had been heavy for 6 months. A hemoglobin of 1.8 g/dL was discovered. Hematocrit was 7.9.

She was found to have marked conjunctival pallor with moist mucous membranes. She had generalized lower pelvic tenderness. Electrocardiogram analysis showed sinus tachycardia, with no acute ischemic changes, no STEMI.

AP CXR showed an enlarged heart but repeat PA and lateral CXR was normal. US pelvis revealed an 11.8 cm fibroid uterus with 5.9 cm dominant fibroid and endometrial stripe of 6.5 mm and normal ovaries with a physiologic 2 cm right ovarian cyst.

Initial laboratory evaluation was complicated by standard laboratory protocols rejecting the patient's complete blood count due to machine error, citing a dilute specimen. The second specimen showed severe anemia with a hemoglobin of 1.8 g/dL.

The patient had no history of sickle cell or other hematopoietic disorders. She denied melenic or bloody stools. She indicated that she had been intermittently homeless for the past year. She denied a history of hepatitis, intravenous drug use, and prosthetic valves.

She was transfused with a total of 6 units of blood over 1 day, reaching a hemoglobin level of 8.1. She was started on iron TID. TSH and PT/PTT ordered for workup of abnormal uterine bleeding were normal. For control of abnormal uterine bleeding and to prevent further episodes, patient was prescribed with an IUD with a bridge of oral contraceptive pills.

TABLE 1: Hematology.

Date	09/26	9/26	9/26	9/25	9/25
Time	1754	1445	0836	2122	1535
Hematology		s/p 6 units	s/p 4 units	s/p 1 unit	Admit
WBC (5.0–10.0 K/MM3)		10.8 H	10.4 H	10.0	12.7 H
RBC (4.20–5.40 M/MM3)		2.96 L	2.6 L	1.63 L	1.18 L
Hgb (12.0–16.0 GM/DL)	8.1 L	7.6 L	6.3 LC	3.3 LC	1.8 LC
Hct (35.0–49.0%)		24.1	20.8	12.5	7.9
MCV (80.0–100.0 FL)		81.4	80.0	76.7 L	66.9
MCH (26.0–32.0 PG)		25.7	24.2	20.2	15.3
MCHC (32.0–36.0 G/DL)		31.5	30.3	26.4	22.8
RDW (11.5–14.5%)		19.1	20.4	26.7	25.7
Plt count (150–450 K/MM3)		400.0	432.0	498.0	517.0
MPV (8.5–12.5 FL)		9.7	10.1	9.8	9.8
Seg neutrophils% (40–70%)		77.4	74.7	80.0	85.5
Lymphocytes% (20–45%)		17.6	19.3	15.0	10.6
Monocytes% (2–11%)		4.3	5.0	5.0	3.9
Eosinophils% (0–5%)		.4	.5	0.0	0.0
Basophils% (0–2%)		.3	.5	0.0	0.0
Nucleated RBCs (none seen/100 WBC)		3 H	3 H	2 H	
Platelet morphology (ADEQ)		ADEQ	ADEQ	INCR H	ADEQ
Polychromasia		+	+		
Hypochromasia		+	+	++	+++
Anisocytosis		++	++	+++	+++
Microcytosis				+	++
Elliptocytes			+		
Peripheral blood smear					

3. Discussion

Our patient had the lowest hemoglobin of which we are aware in an ambulatory patient with abnormal uterine bleeding. Severe anemia at a level < 4 g/dL is uncommonly seen in the hospital setting. Only two other cases have been reported on an ambulatory patient with a hemoglobin value of 1.8 g/dL, due to lower gastrointestinal bleeding and chronic urinary bleeding [7, 8]. This case adds to other case reports of patient survival with a hemoglobin level of <2 g/dL [7, 9, 10].

Treatment of acute blood loss anemia is directed by the patient's clinical presentation and pertinent laboratory profiles and should follow the rule of ABC (airway, breathing, and circulation). In the emergent setting, hemodynamic stability is of great importance [11]. In this patient, her nadir of hemoglobin was 1.8 g/dL, which was improved to 8.1 g/dL with six units of PRBC (Table 1). Long-term treatment is based on the underlying etiology of DUB. In this patient, she had no means of contraception. Therefore, long-acting progestin, medroxyprogesterone acetate (Provera) is a wise choice [11].

Conflicts of Interest

The authors declare that they have no conflicts of interest and nothing to disclose.

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