

SEVERE ANEMIA IN POSTPARTUM HEMORRHAGE: A CASE REPORT

ANEMIA SEVERA EN HEMORRAGIA POSTPARTO: UN REPORTE DE CASO

Norma Miriam Felles-Montoya  ^{1,a,b}

Filiation:

¹ Universidad Nacional de Barranca,
Faculty of Health Sciences, School of
Obstetrics, Lima, Peru

^a Obstetrician specialist in high obstetric
risk

^b Master's Degree in Higher Education and
University Research

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Correspondence:

Norma Felles Montoya

Email:

nfelles@unab.edu.pe

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ABSTRACT

The present case report aims to analyze the early diagnosis of postpartum hemorrhage in order for obstetricians to recognize it in a timely manner. The research methodology is framed in a bibliographical review of databases, a descriptive analytical study, and the information is collected from the structured clinical history based on the CARE verification guide. The case is a 21-year-old pregnant patient, with no risk factors in pregnancy and childbirth, with hemoglobin 12.2 gr/dl prior to delivery, episiotomy at birth and occurrence of third-degree vaginal tear, who undergoes immediate postpartum control with normal parameters, presenting at 6 hours postpartum marked pallor, headache, dizziness and Hb 6.9 gr/dl. The amount of blood loss is estimated, and the severity of blood loss is assessed on the hemodynamic state of the patient through the shock index.

Key words: Postpartum hemorrhage, Anemia, Clinical diagnosis, Shock index (Source: MeSH NLM)

RESUMEN

El presente reporte de caso tiene como objetivo analizar el diagnóstico precoz sobre la hemorragia postparto con la finalidad que las obstetras reconozcan oportunamente. La metodología de la investigación se enmarca en revisión bibliográfica de base de datos, un estudio descriptivo analítico, la recolección de la información es la historia clínica estructurada en base a la Guía de comprobación CARE. El caso es paciente gestante de 21 años, sin factores de riesgo en el embarazo y parto, con hemoglobina 12.2 gr/dl previos al parto, episiotomía al nacimiento y ocurrencia de desgarro vaginal de tercer grado, que cursa un control de puerperio inmediato con parámetros normales, presentando a las 6 horas postparto palidez marcada, cefalea, mareos y Hb 6.9 gr/dl. Se plantea la estimación de la cuantía de pérdida sanguínea y valoración de la severidad de la pérdida sanguínea sobre el estado hemodinámico de la paciente a través del índice shock.

Palabras clave: Hemorragia postparto, Anemia, Diagnóstico clínico, Índice de shock (Fuente: DeCS, BIREME)

INTRODUCTION

Postpartum hemorrhage (PPH) is classically defined as the loss of 500 ml or more at the end of the third period of delivery (1), while the World Health Organization (WHO) describes it as visually estimated blood loss of 500 ml or more and severe blood loss greater than 1000 ml within 24 hours after delivery (2,3). On the other hand, the American College of Obstetricians and Gynecologists (ACOG) points out, blood loss equal to or greater than 1000 ml or blood loss accompanied by signs or symptoms of hypovolemia within 24 hours postpartum either vaginal or cesarean section, on the other hand, the Royal College of Obstetricians and Gynecologists (RCOG) details according to the volume of blood loss, mild between 500 to 1000 ml, moderate between 1000 to 2000 ml and severe greater than 2000 ml (4).

Today, the most widely accepted is the loss of any amount of blood that causes signs of hypovolemia and/or hemodynamic instability in the patient (5)

PPH is an obstetric emergency that complicates between 1 and 10% of all deliveries (4), a major cause of hypovolemic shock with serious consequences, such as severe anemia, blood transfusions, admissions to intensive care units, urgent surgical interventions (hysterectomy) producing lifelong reproductive disability, psychological trauma and maternal death (6)

PPH is the leading cause of maternal mortality worldwide, approximately 80% of PPH deaths occur in low- and middle-income countries due to delays in diagnosis and treatment (4), causing 70,000 maternal deaths worldwide each year, accounting for more than 20% of all maternal deaths (7).

Maternal death (MM) in Peru occurs in a higher percentage in the puerperium, 59.8% occurred in the five-year period 2015 to 2019, with a tendency to increase in the years 2020 by 60.6%, 2021 by 64.8%, 2022 by 60.7% and in 2023 by 65.2% (8,9).

The diagnosis of PPH is complicated, divergence in different definitions, making decisions in absolute values cannot always reflect the severity of the case, the definition of PPH based on the amount of blood lost does not have high-quality evidence to support it, a more robust definition is needed that should not only include the amount of blood loss but also cardiovascular clinical signs and symptoms (10).

Therefore, the diagnosis of PPH is based on the estimation of blood loss and the severity of blood loss on the hemodynamic status of the patient assessed through the shock index, vital to make decisions and carry out timely interventions to prevent maternal morbidity and mortality.

Table 1. First phase of labor

Dilation phase: 8 hours, 37 minutes			
Latent phase		Active phase	
General Exam	Obstetric control	Vital functions	Obstetric control
Normocephalic head Fascia: normal Neck: no alterations Thorax: No alterations Vital functions in normal parameters.	AU: 36 cm Fetus LCD LCF: 136 per minute. DU: Sporadic Vaginal examination: dilation 3 cm, ovular membranes intact. Presentation height 0, incorporation 90%.	Normal parameters.	LCF: 134 per minute. DU: 3 in 10 minutes, intensity: +++, duration 40 minutes. Dilation: 10 cm. Presentation height: + 1, 100% incorporation, whole ovular membranes.
Diagnosis	According to a nulliparous digest of 40 weeks 6 days latent phase of labor, full-term pregnancy.	Diagnosis	According to a nulliparous digest of 40 weeks 6 days by ultrasound of the second trimester, active phase of labor, complete dilation.

Table 2. Second and third phases of labor

Labor Phase: 13 minutes		Delivery phase: 7 minutes	
Vital functions	Obstetric control	Vital functions	Obstetric control
Normal parameters	RN weight 3460 gr Episiotomies are performed and vaginal tearing occurs No report of blood loss	Normal parameters	Directed delivery Normal placenta Schutz Modality Blood loss 300cc
Diagnosis	Childbirth Care Live newborn Episiotomy Third-degree vaginal tear	Diagnosis	Complete delivery

Therefore, I present the clinical case with the aim of analyzing the early diagnosis of hemorrhage during the immediate puerperium with the purpose that the obstetrics staff recognizes in a timely manner.

CASE PRESENTATION

A 21-year-old pregnant woman, cohabiting, with incomplete secondary school, housewife resides in an urban area.

Background: Unimportant family and personal

Gynecological-obstetric history: One abortion, interreproductive period 3 years, current pregnancy without complications.

Interventions and results: Adequate prenatal care, auxiliary tests in normal parameters, BMI: normal, culminates gestation with 12.2 g/dl of Hb.

Table 1, 2 and 3 shows the phases of labor and the activities performed.

DISCUSSION

The clinical diagnosis of PPH according to the Clinical Practice Guidelines of the National Maternal and Perinatal Institute, consists of two essential aspects: first, the estimation of the amount of blood loss and second, the evaluation of the severity of blood loss on the hemodynamic status of the patient (2)

First, estimating the amount of blood loss through visual estimation (2,5), in the initial phases the quantification of blood loss can be difficult, it is really complicated because it can mix with body fluids, or it can be retained in the intrauterine cavity leading to inaccuracies (5)

In clinical practice, the quantification of blood loss during childbirth and/or cesarean section is by visual estimation by the care professional (2), stating that health professionals, regardless of their level of training and experience, are inaccurate when estimating the volume of blood loss (11)

Table 3. Fourth phase of labor

Puerperium phase: 6 hours 13 minutes		
Vital functions	Interventions	Obstetric control
Hemodynamically stable at check-ups within two hours postpartum	CI NA 9% with 30 IU oxytocin Control hematocrit requested	Contracted uterus Blood lochia in normal quantity
5th control: BP: 110/60 mmHg, P: 112 x min, T° 37.1°C, R: 19 x min	Hb control 8.3 gr/dl Administration of iron sacrate 100 mg	
6th control: BP: 95/50 mmHg, P: 112 x min, T° 37.2°C, R: 19 x min Marked pallor, presence of dizziness, headache.	Hb control 6.9 gr/dl Administration of one unit of blood. On discharge with Hb 8 gr/dl.	

Studies establish the inaccuracy of visual estimation, referring to overestimation of low volumes and underestimation of larger volumes. (2,11) while other authors stated that estimated blood loss is usually overestimated to half of the actual loss (1,5)

In the clinical case, there is evidence of underestimation of the quantification of blood loss, as Carbajal points out: obstetricians often underestimate blood loss (12).

Despite being difficult and inaccurate, the calculation of blood loss by visual estimation is still recommended by the WHO (13).

The second essential aspect to make the clinical diagnosis of PPH is to evaluate the hemodynamic status of the patient caused by blood loss through the Shock Index (SI) (2). National and international organizations have introduced SI as a simple and clinically effective vital sign (4,2), defined as the relationship between heart rate and systolic blood pressure, between values 0.7 and 0.9 in the pregnant population (4,5).

Due to its simplicity and easy applicability, SI has been studied by different authors. Different studies have shown that it is associated with the need for blood transfusion (14), used as a parameter to detect hemodynamic instability and hypovolemia in obstetrics, but there is limited evidence on its usefulness to detect PPH (15,16) and rarely as a predictor of primary PPH (18).

However, SI is incorporated into the Guidelines for the management of PPH as an "early obstetric warning" tool for maternal hemodynamic instability after delivery (1). Evidence has shown that it is the most accurate predictor of hypovolemia, useful in estimating massive blood loss, and predicting blood transfusion (5)

The clinical surveillance of the case presented based on the assessment of individual vital signs and a hemoglobin control is controversial, Carbajal argues that for blood pressure to present a significant drop it does not manifest itself until there is a loss of more than 25% of blood volume, approximately greater than or equal to 1500 ml in pregnant women. states that the assessment of vital functions and hematocrit are poor predictors of

acute blood loss, leading to a late diagnosis of PPH and replacement of blood volume (12)

An important challenge is the early recognition of PPH, which requires normative documents that regulate the processes, competencies of professionals who provide care to women in the puerperium, and strict control that allows the joint evaluation of blood loss, the hemodynamic status of the patient, and the application of the IS.

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Contributions:

Norma Felles Montoya: Carried out the conceptualization, methodology, validation, research, resources, writing of the original draft, writing and revision of the final version of the manuscript, visualization and administration.