

Hemostatic Treatment and Strategies in Post-Partum Hemorrhage

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Abstracts:

The past few decades have seen major advances in multidisciplinary obstetric with hemostatic disorders. Awareness of the impact of hemostatic disorders has improved among the obstetric community. It is considered as the main cause of admission to intensive care units during or after pregnancy. It is responsible for 150,000 maternal deaths per year worldwide, i.e. one death every four minutes. It may be marked by a noisy clinic or by insidious bleeding, which is often underestimated. The main aim of our study is to determine the incidence of Coagulation disorders during PPH in the obstetric intensive care unit. It also aims to assess the impact of these disorders on maternal prognosis.

Keywords: Hemostatic, obstetric unit care, post-partum,

INTRODUCTION

Postpartum hemorrhage is defined as the loss of 500 ml or more of blood in the 24 hours following delivery. It is considered severe when blood loss exceeds 1000 ml. [1]

The main cause of admission to intensive care units during or after pregnancy [2], it is responsible for 150,000 maternal deaths per year worldwide, i.e. one death every four minutes. It may be marked by a noisy clinic or by insidious bleeding, which is often underestimated [3].

The main aim of our study is to determine the incidence of Coagulation disorders during PPH in the obstetric intensive care unit of the Hospital Mère Enfant ABDERRAHIM EL HAROUCHI. It also aims to assess the impact of these disorders on maternal prognosis.

MATERIAL AND METHOD

Our work is a retrospective descriptive study, extended over a period of 2 years, from January 2022 to December 2023.

Our study was carried out in the obstetric intensive care unit of ABDERRAHIM EL HAROUCHI mother and child hospital, CHU Ibn Rochd Casablanca.

Patients referred to the gynecological intensive care unit of the CHU de Casablanca, for management of PPH occurring within 24 following delivery at the CHU, CHP, private clinic, birthing center or at home.

RESULTS:

Patients ranged in age from 18 to 42 years, with an average age of 31.4 ±5.9 years, and were predominantly female.

There were 42 parturients of urban origin, i.e. 63% of cases. There were 24 parturients of rural origin, 37% of cases.

The average gestational age was 2.92, with a minimum gestational age of 1 and a maximum gestational age of 7. The average parity was 2.75, with extremes ranging from 1 to 6. 74% of parturients were multiparous.

Pregnancies were well monitored in 24 parturients, i.e. 36% of cases, and poorly or not monitored in 42 parturients, i.e. 64% of cases. The majority of pregnancies (88%) were carried to term, and the majority of patients (55%) gave birth in a hospital hospital.

Time elapsed between delivery and hemorrhage

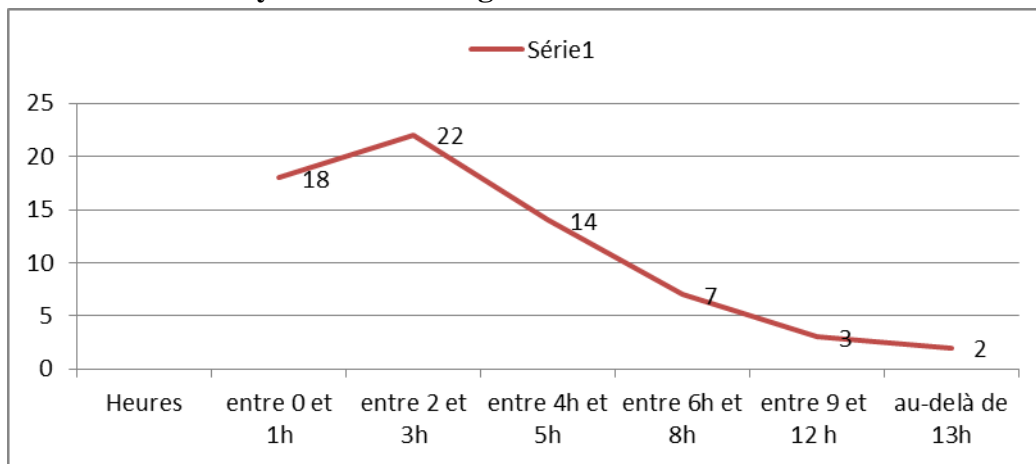


Figure 1: Distribution of parturients by time between delivery and hemorrhage

40 patients had a poor uterine globe, i.e. 60%.26 patients had a good uterine globe, i.e. 40% of cases.

Primary haemostasis disorders:

32 patients had thrombocytopenia (PLQ <150000/mm³), i.e. 48%, 12 of whom had a plq <100000, i.e. 18%, while nine patients had a platelet count below 50,000(13% of case)

A prothrombin rate below 70% was found in 42 patients, i.e.patients, wich 63% of cases, 19 of whom had a PT<50%, wich 28%.31 patients had a prolonged activated partial thromboplastin time. Hypofibrinemia (<2g/L) was noted in 31 patients , 47% of cases Fibrinogen levels were normal (>2g/L) in 35 parturients.

Complete HELLP syndrome was found in 44 patients (11% of cases). There were 11 cases of DIC,16% of patients; in 2 patients, DIC complicated a pre-existing HELLP syndrome.

Table 1: Distribution of patients by etiology of PPH

Etiologies	Number	Percentage
Uterine Inertia	31	47%
Uterine Rupture	10	15%
Placental Anomalies insertion	8	12%

cervico-vaginal lesions	7	11%
Placental retention	6	9%
Coagulation disorders	6%	6%

Obstetrical procedures

Table 2: Distribution of patients according to obstetrical procedure performed.

Obstetrical gesture	Number	Percentage
uterine revision	60	82%
Under valve Examination	50	75%
Uterine Massage	46	69%
Sandbagging	38	57%

Medical treatment:

Oxytocin was administered in 31 patients, i.e. 47% of cases, with a dose ranging from 10IU to 60IU. Tranexamic acid were administered in 49 patients, i.e. 74% of cases, with a dose ranging from 1 to 3g/d. All patients received antibiotic prophylaxis with Amoxicillin + Clavulanic Acid.

Surgical treatment:

Treatment performed	Number	Percentage
Suture of a cervico-vaginal lesion	13	12%
Suture of uterine rupture	10	9%
Ligation of uterine arteries	5	5%
Ligation of hypogastric arteries	5	5%
Triple ligation	25	23%
Uterine Plicature (Technique B-Lynch)	6	6%

Radical therapy:

Hemostasis hysterectomy was necessary in 37 patients, i.e. 56% of cases. An immediate hysterectomy was performed in 21 patients, i.e. 72% of cases, including 11 uterine inertia, 8 uterine ruptures and 2 insertion anomalies.

DISCUSSION

The diagnosis of postpartum hemorrhage is sometimes difficult to make, as measures such as hemoglobin levels or the need for blood transfusion are methods subject to variation, so direct measurement of blood loss remains the gold standard[2]. The incidence of PPH for vaginal delivery and caesarean section is similar to that reported in the literature, with incidences of 6.4% described by Dupont in 2013 in an incidence study carried out in six perinatal networks in France from 2004 to 2006 [3].

As in the literature, women with a high number of pregnancies and/or deliveries were more represented, led by grand multiparous women (36.6%), followed by multiparous women (26.8%) and pauciparous women (22%). Primiparous women were in the minority[4].

Only 19.5% of parturients had a history of PPH. In our study, PPH was most common among women who had not undergone ANC (39%), followed by those who had undergone ANC 1-4 (31.7%). DIALLO B AND YALCOUE Y reported 77.5% and 50.3% respectively of [8]. s ANC in their studies.

The most common and important cause of post-partum hemorrhage is uterine atony, accounting for around 70% of immediate PPH. The primary mechanism of immediate hemostasis following childbirth is myometrial contraction causing occlusion of uterine blood vessels, also known as living uterine ligation. In our study, uterine atony accounted for 47% of PPH causes; retained products of conception were involved in 26.8%; childbirth-related trauma accounted for 17.1%, placental retention for 24.60%, soft tissue trauma for 11.5% and coagulopathy for 11.5%. [12].

Post-partum haemorrhage is a major obstetric emergency, whose rapid management is vital to the mother's survival. Management must be carried out jointly by the obstetrician-gynecologist, the intensive care anesthetist, the midwife and the nurses. The time of onset of care must be carefully noted (T0), as the actions undertaken are time-consuming and delays in response to treatment can influence therapeutic strategies. a)Obstetrical techniques and gestures: uterine revision and uterine massage were the obstetrical gestures most frequently used, with 75.6% and 73% respectively. In M. ELL è Marcel YADYANGOand [9]. YALCOUE Y, . [8].

Uterine revision and massage were also the first procedures performed. Manual removal of the placenta was performed in 12% of patients. 47% of post-partum haemorrhages are linked to uterine atony, the initial treatment of which is based on the administration of uterotonics - oxytocin (Syntocinon®): first-line treatment administered in 97.6% of cases. If ineffective after 10 to 20 minutes, initiation of a more powerful uterotonic treatment - Misoprostol (Cytotec®) and 65.9% required transfusion[5] [4]... This result is higher than those of KEITA S(12); DIALLO B (13)and M. ELL è Marcel YADYANGO(15), who respectively report a frequency of 44.80% and 62.3% of blood transfusion. This difference could be explained by the availability of blood at the hospital.

Surgical management is divided into conservative treatment to preserve subsequent fertility, and radical treatment as a last resort. In our study, 12% of patients underwent haemostasis sutures for soft tissue lesions. Hysterectomy in the management of severe post-partum haemorrhage is a last resort to stop the bleeding. 56% of patients had benefited from a haemostasis hysterectomy. This frequency is higher than those reported by Coulibaly S and M. ELL è Marcel YADYANGO, which were 14% and 16% respectively [12]. The choice of surgical technique is a matter for the school and the existing operating theatre. Uterine embolization and hypogastric artery ligation are also surgical means of stopping hemorrhage, but these practices are not yet used in our department, due to a lack of technicians.

At the end of our study, we can conclude that PPH constitutes a major public health problem. This pathology frequently affects parturients who give birth at home, who do not comply with ANC, those with excessive HU, multiparous women and those with a history of post-partum haemorrhage.

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