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A Case of Maternal Near Miss of Postpartum Hemorrhage on a Dilapidating Wound of the Perineum and Vagina

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ABSTRACT

Background: In a context marked by increasing maternal mortality rate in the last 15 years, the authors present a case of maternal near miss of postpartum hemorrhage on a dilapidating wound of the perineum and vagina.

Case: The case of a 24 year old primigravid patient, who had been referred from a district hospital to the Douala General Hospital-Cameroon (tertiary hospital), in a state of hemodynamic shock following an episiotomy complicated by dilapidation of the perineum, vagina and profuse bleeding. In emergency resuscitation, blood transfusion and surgical repair of the wound helped to relief the shock. For 2 years she had sequelae such as: Low self-esteem, fear of sexual intercourse and a subsequent pregnancy. After psychological care she got pregnant again and delivered vaginally without materno-fetal complications.

Conclusion: This case of maternal near miss which could be the visible part of the iceberg in our context is a wakeup call for good practices, early referral, capacity building and equipping of district hospitals for better management of obstetrical emergencies.

Keywords: Maternal near miss, Postpartum hemorrhage, Perineal wound, Vaginal wound

INTRODUCTION

Despite numerous strategies put in place for dozen years maternal mortality remains a public health problem in low income countries. In 2010 WHO, UNICEF (United Children's Fund), UNFPA (United Nations Fund for Population Activities) and World Bank estimated across the population that the maternal mortality rate was about 260 maternal deaths per 100000 live births, with the majority in Sub Saharan Africa [1]. In Cameroon this rate is increasing, from 430 deaths in 1998 to 782 maternal deaths per 100000 live births since 2011 [2,3]. Late diagnosis, management and referrals are the main challenges to overcome. A maternal death is defined as «the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes. A maternal near-miss (MNM) is defined as "woman who nearly died but survived a complication that occurred during pregnancy, childbirth or within 42 days of termination of pregnancy" [4]. In practice, maternal near-misses denote women who survive life-threatening events (i.e. organ dysfunction) [5]. Maternal morbidity may precede a maternal death; more over the causes of near misses are not different from that of maternal death. Therefore, the systematic identification and the study of near-miss cases provide further understanding of the determinants of maternal mortality. It evaluates the quality of obstetric care and may contribute to maternal mortality reduction [6,7]. The concept of "maternal near

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miss" was recently introduced with regard to maternal mortality. However in Cameroon, a study on its prevalence and even its incidence has not yet been made. Hence the interest of this clinical case which aims not only to share our experience in Sub Saharan Africa on this important public health issue, but also to take Health policy makers, researchers and health personnel to integrate this concept into operational research on maternal mortality in our environment.

CASE

A case of a 24-year-old primiparous patient received in the emergency unit of the Douala General Hospital (DGH) in a state of hemorrhagic shock with perino-vaginal dilapidation. She delivered via episiotomy, in a district hospital (DH), to a live fetus weighing 3500 g. During the episiotomy, she bled profusely and persistently despite the redo of the sutures (3 times in the space of 12 h time). Due to persistence of the bleeding and deterioration of her general state, she was referred 14 h post-partum to the DGH. The hospital ambulance had broken down, and it was with difficulty that the family found a taxi that arrived at the 20th hour post-partum at the obstetric emergency unit of DGH. She was in a state of hemorrhagic shock and had as vital signs; BP=70/40 mmHg; Pulse= 120 beats/min; Temp= 37.5 C; Respiratory rate= 22 breaths/min. She was wearing a vaginal tampon soaked with bright red blood **(Figure 1A)**.

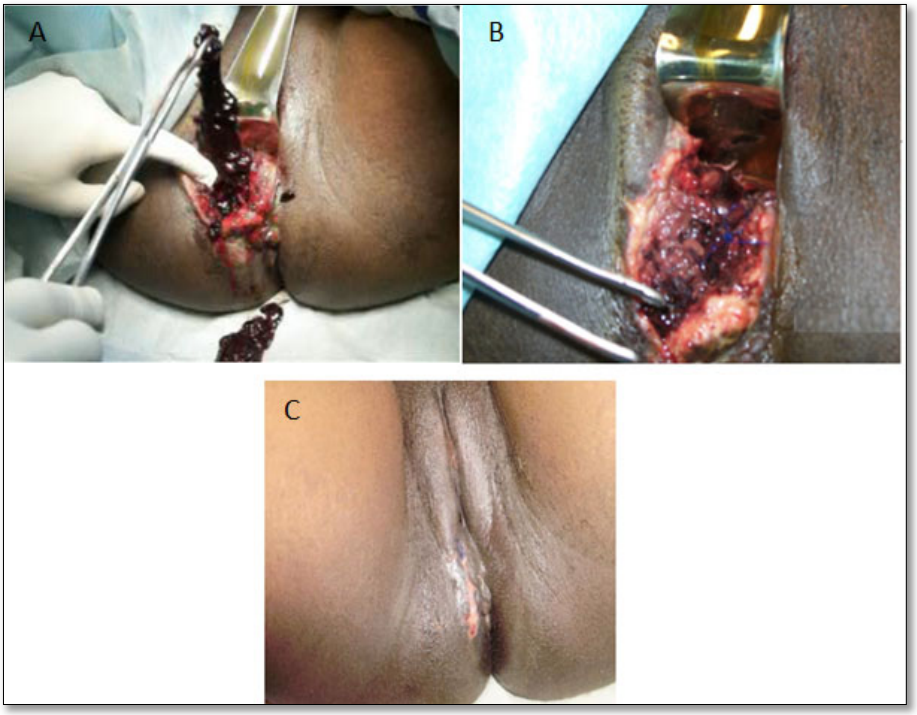

Figure 1. Clinical images of the girl who reported in a state of hemorrhagic shock with perino-vaginal dilapidation.

EMERGENCY CARE

She was rushed to the theatre (after placing a central venous line) where she was intubated. She had a cardiac arrest during the reanimation, which resolved after continuous use of vasoactive drugs, colloids and blood transfusion. Emergency laboratory examinations showed: blood group: O rhesus positive, hemoglobin: 3g/dl; white blood cell count:10000/mm^3; platelets= 202000/mm^3, Creatinin= 8mg/l, and prothrombin rate: 100%.

EXPLORATION AND SURGICAL TREATMENT

Explorative surgery identified a large, deep and dilapidating episiotomy wound extending from the vulva to mid-depth of the vagina, sutured with non-absorbable sutures; many dead spaces that were actively bleeding and from which we removed large blood clots (**Figure 1A and B**). After all the sutures were removed, we eliminated lesions on the anal sphincter, fistulas and a rectal wound. The wound had been washed with isotonic saline and repaired with absorbable sutures (polygactin). The patient was discharged after 72 hours on Ceftriaxone per os (1g/12hours for 10 days), ketoprofene 100mg suppository (100mg/12 hours for 6 days) and sit bath with polyvidone iodine. At Day 12 post surgery we observed a good wound healing response **(Figure 1C**)

SEQUELAE, MANAGEMENT AND OUTCOME

For 2 years following the incident, the patient demonstrated loss of self-esteem, denial of subsequent pregnancy for fear

of dying during child birth, phobia for sexual intercourse and loss of libido. After 5 months of follow up by a psychologist the patient was cured of her neurosis. During the third year she got pregnant again and gave birth by vaginal delivery to a live fetus weighing 3300 g, without any complications.

DISCUSSION

This case brings out the problems of malpractice and delay decried in Sub Saharan Africa in the management of obstetrical emergencies and the fight against maternal mortality [8,9].

Malpractice: An episiotomy should not be elaborative to the point of involving more than one third the depth of the vagina. Non absorbable sutures are not suitable for repairing muscular and mucosal layers (Figure 2); persistence of bleeding was due to dead spaces resulting from poor wound repair.

Delay: The delays in referrals are a major cause of morbidity and mortality described in low resources countries. Delayed diagnosis, inappropriate transfer, and inadequate utilization of resources, had also being mention [10]. But in our study lack of skilled personnel, poor infrastructure (lack of intensive care unit) and poor transport facilities were the main causes of the delays in referrals.

Sequelae: This case shows at which extend an obstetrical mal practice can be deleterious for the affective, sexual and reproductive live of a patient. Some authors has being proved that maternal near-miss could cause not only disruption of bodily integrity through injury, but also a feeling of sexual mutilation so much so that some patient feel so disgusted with their own body that they refrained from any sexual activity [11-13]. Unlike our patient who had no complication such as genital mutilation or fistula, some authors have described cases of decaying episiotomies complicated by vesico-uterine fistulas which had a deleterious impact on their bodily hygiene, their integration into society and their professional life (job loss, reduced productivity) [11,12].

THE DISTRICT HOSPITAL IN OUR SETTING

The district hospital (DH) is a place of excellence and good practice in comprehensive emergency obstetric care at the operational level: There should be adequate equipment and staff capable of effectively managing obstetric emergencies [13]. Therefore this case, which could be the visible part of the iceberg in our context where DHs have a weak response in the management of obstetric emergencies, is an indicator of a poor performance level [14]. In our environment it is difficult to find a reanimation doctor in a DH. Few DHs have a blood bank. These HDs do not have an intensive care unit that can manage cases of acute renal failure, cardiogenic / hypovolemic shock, blood crase disorder. Consequently, patients who have "maternal near miss" who could have been taken care of at the DH level are referred to tertiary hospitals, which delays effective care and increases the risk of maternal death. This failure is a limitation in the fight against maternal mortality in our environment where postpartum hemorrhage is the main cause, as in most countries with limited resources [2,3].

CONCLUSION

In view of the limitations in the quality of management of obstetrical emergencies, equipment's and the functioning of certain DHs in our environment, this case of maternal near miss could be a visible part of the iceberg: Therefore, we recommend that an audit be done by decision makers so as to:

- Reinforce the capacities of the personnel in the good practice of obstetric gestures, particularly episiotomy and its repair.
- Build staff capacity in early referral
- Provide them with adequate equipment and qualified personnel for the resuscitation of obstetric emergencies
- Provide them with a blood bank.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Ethical approval was obtained from Douala General Hospital for publication of this case report.

CONSENT FOR PUBLICATION

Written informed consent was obtained from the patient for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-chief of this Journal.

AVAILABILITY OF DATA AND MATERIAL

The datasets (medical file of the patient) in available in Douala General Hospital on reasonable request.

COMPETING INTERESTS

The author declare that they have no competing interests.

AUTHOR'S CONTRIBUTION

All authors participated in the design and editing of the manuscript; all authors approved the final version of the manuscript.

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