

Ebola in Obstetric Environment: By the Way of 3 Cases to the Service of Obstetric Gynecology of the Hospital National Donka, Fallen of Conakry

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Rec date: April 30, 2016; Acc date: May 10, 2016; Pub date: May 18, 2016

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Abstract

The Ebola Virus Disease is a very infectious viral pathology; late diagnosis in the pregnant women aggravated the prognosis and exposed health care providers. Our objective is to make known this pathology for a more precocious diagnosis in the obstetric environment. We are reporting three clinical cases, respectively, an in utero death, a hemorrhage and an eclampsia. Triggering birth, the C-section, the blood transfusion, the maternal and neonatal resuscitation were done. Eighty three contacts were recorded among health providers without any contamination case. The maternal, fetal and neonatal prognosis was fatal in these three cases.

Keywords: Ebola; Exposure; Prognosis; Obstetrics; Guinea

Introduction

The virus of the Ebola Virus Disease outbreak occurring in West Africa since the late 2013 was discovered the same year in Guinea and considered as a mutated with 97% identical with that found in Democratic Republic of Congo (DRC) of the Zaire species [1-4].

Its occurrence in pregnancy may negatively influence the maternal mortality ratio, which was 724/100 000 living births in 2012 in Guinea [5] by the increased bleeding during pregnancy, labour and the immediate postpartum. Our goal is to make known this disease for an earlier screening in obstetric environment. We reported three clinical cases of bleeding by abortion, death in utero, and eclampsia.

Case No. 1

This is a patient of 34 years old, three pregnancies with two stillborns, and a living child, accountant, married, living in Conakry who were admitted on 12/26/2014 at 8 pm 23 minutes for vaginal bleeding on a two months amenorrhea without signs of life. The diagnosis of death body from first quarter haemorrhages was made with transfer of the body to the morgue via obstetric emergencies unit. The systematic Ebola testing result was positive 24 hours after community burial.

Community audit revealed a stay in Coyah, an epicenter of the epidemic in Guinea for the funeral of a deceased cousin the ninth day post partum, with symptoms of poly-arthralgia, asthenia of increasing intensity and bleedings. She received care at the district hospital without success, hence her transfer to a Dapompa clinic in the suburb of Conakry; then to our service for seizures. The diagnosis of death body from Ebola virus disease with in utero death of a pregnancy of about 8 weeks was reported. Six service providers were identified and monitored as contact persons without clinical manifestation (Figure 1).



Figure 1: Wearing and Taking off of the Individual Protection Equipment Tyvek

Case No. 2

Patient aged 28 years old, three pregnancies, two deliveries, married, housewife, referred from Benty (Forécariah), an epicenter of Ebola virus disease and admitted on 01/09/2015 for absence of fetal active movements and fever since 72 hours on a seven months pregnancy with a temperature of 38°C, a blood pressure of 90/60 mm Hg, a pulse

of 100 beats/minute and a good general condition. The obstetrical examination found a foetal death in utero associated with a probable malaria on estimated pregnancy of 32 weeks with a Bishop score <4.

The emergency blood test was negative for malaria and a haemoglobin rate of 10 g/100 ml. An activation of the labour by using Misoprostol 200 microg in sublingual every six hours without exceeding three times led to foetal expulsion in less than 24 hours followed by the Active Management of the Third Period of Delivery. The staff on duty alerted by the finding of an epistaxis followed by weakness and persistent post partum haemorrhage, suspected the Ebola virus disease MVE and called the Red Cross agents, for an Ebola confirmatory test on the delivery table, before the sudden death occurred during blood transfusion, by coagulopathy.

The husband disappeared without waiting the test result that was positive to Ebola virus after 24 hours. His three years old ill daughter tested positive, was successfully treated at the Ebola Treatment Centre. Sixteen people were identified and monitored as contact persons, in the service for 21 days without contagion (Figure 2).



Figure 2: Ebola triage and screening Unit

Case No. 3

Woman aged 40, married, eleven pregnancies, ten deliveries including 6 living children, living in Matam (Conakry), admitted in emergency on June 30, 2015 at 7 pm for seizures and confusion with a 7 months pregnancy after being declared as a non Ebola suspected case by the Ebola virus disease triage and screening unit.

The physical examination showed signs of deterioration of general condition, agitation, conjunctiva pallor with a temperature at 36°C, a BP of 160/110 mm Hg, a pulse of 90/minute and a respiratory rate of 24 cycles/minute. The diagnosis of eclampsia associated with anaemia on a normal pregnancy of 30-32 SA was made. Treatment with the magnesium sulfate and nifedipine 10 mg was administered without success, and repetition of the crises at 00h 45 and 2 hours 15 minutes in the morning. C-section performed for eclampsia allowed to extract a male foetus living, with an Apgar score of 5/10 in the 1st minute, and 7/10 in the 5th minute, weighing 1800 g, height 44 cm head circumference 30 cm, and a complete placenta.

At 3:28 a vaginal haemorrhage made of fluid blood, not coagulated, abundant and persistent occurred, and the patient dies from coagulopathy. The newborn, hospitalized at the Institute of Nutrition and Children's Health in Donka hospital, for prematurity and respiratory distress, died on the second day of his birth. The results of various post mortem saliva samples to RT-PCR / Ebola virus disease were positive, with an exposure of 43 service providers, including 16 in obstetrics and 27 in neonatology; and the suspect from the maintenance staff for amoebic dysentery was admitted to the Ebola treatment centre, and released seventy-two hours after two negative tests for Ebola virus disease.

Discussion

During outbreak of the Ebola virus disease, it is essential that all institution isolates sorts and manages appropriately all pregnant women who may be infected with the highly contagious viral disease. However, the rapid identification of infected patients is not always possible because it has no specific initial symptoms, and some infected individuals remain asymptomatic [1,6].

The a pyrexia observed with the third patient was due to the terminal phase of the Ebola virus disease which is usually normothermia (no fever), confusion, anuria, shock, tachypnea, arthralgia and ocular involvement [1]. Seizures (cases 1 and 3) would be the expression of the advanced stage of Ebola virus disease taken for eclampsia (case 3), a relevant diagnosis for obstetric and neonatal care, comprehensive emergency.

The disease is transmitted between humans through direct contact with body fluids and tissues from patients with symptoms of the disease at an advanced stage, (cases 2 and 3) or by direct contact with the remains (case 1), [7]. The diagnosis of Ebola virus disease was confirmed only in post-mortem by gene amplification preceded by a reverse transcription (RT-PCR) [8]. The delayed in the diagnosis may be related to the absence of triage, screening and isolation unit of suspected persons (case 2), or the a pyrexia during the triage with the not reported suspected patient already confirmed and far from the Ebola treatment center of Forecariah (case 3). The reluctance of the population was observed by the patient long the circuit (case1), the falsity of the information on the origin (case 2and 3) and identity (case 3).

Care outside of the Ebola treatment center, not recommended by the WHO, was administered to patients and newborn in two health structures. The activation of the labor on fetal death in utero with Misoprostol, a drug widely used because of its uterotonic properties and actions on the cervix [9], is prohibited as the woman in labor is positive for Ebola virus [1]. The Ebola treatment center, which has a specific Personal Protective Equipment (PPE), is the ideal setting for treatment of all suspected or confirmed cases of Ebola virus disease whatever obstetric indications [1,4].

Pregnant women usually lose their lives (case 1) and their fetus during important bleeding (cases 1 and 2) or newborn (case 3), a severe impairment of hemostasis and immune system leading to severe immunosuppression with maternal fatality sometimes, reaching 90% [1,4] and 100% in our department by coagulopathy. This coagulopathy is often accompanied by renal failure, liver damage, a central nervous system and terminal shock with organ failure leading to death [1,10]. No invasive procedure is recommended by the WHO whatever obstetric indication in patients with Ebola virus disease [1], a severe and usually fatal disease.

As in September 2015, 11,306 deaths out of 28,256 Ebola virus disease cases were recorded [11]. In Guinea, as of 09/10/2015, one hundred ninety-six caregivers were confirmed, including 100 deaths confirmed and 15 probable, 58.7% [12]. The eighty-three providers registered as contact persons, 56 at the Maternity (including 4 for the second time) and 27 at the Institute of Nutrition and Children's Health, escaped because of their training in prevention and control of infection (PCI) and the strict compliance of the Individual Protection Equipment (IPE) wearing. They had a psychological experience and post exposure stigma. The end of the epidemic of Ebola virus disease in Guinea was proclaimed by WHO on 12.29.2015.

Conclusion

The Ebola virus disease is a highly contagious viral disease in which obstetric staff is exposed through all body fluids, and the difficult identification of patients with no specific signs. The permanent application of precautions to all patients allowed caregivers to escape infection. We encourage the care staff to sustain the gains acquired from the training, in prevention and control of infections/Ebola for all patients regardless of the suspected diagnosis or the familiarity with the patient.

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