Blood, birthing and body fluids: delivering and staying alive in an Ebola Management Centre

*Séverine Caluwaerts¹, Daphne Lagrou¹, Patricia Lledo², Benjamin Black¹, Tom Decroo¹, Alseny Modet Camara³, Michel Van Herp¹

¹Médecins Sans Frontières (MSF), Brussels, Belgium; ²MSF, Barcelona, Spain; ³MSF, Conakry, Guinea

*severine.caluwaerts@brussels.msf.org

Introduction

Data on pregnancy complicated by Zaire-strain Ebola virus disease (EVD) are scarce. Maternal mortality with EVD is usually around 90%, foetal/neonatal mortality of transplacental infection is 100%. Suspected/confirmed EVD in pregnancy poses practical and ethical challenges, and often causes anxiety in medical personnel due to risks around body fluids at delivery. In a retrospective analysis of routine programme data, we aimed to describe the pregnant EVD survivors, the EVD/pregnancy management protocol used during the 2014/2015 West Africa epidemic, and the foetal/neonatal outcome of transplacental EVD infection.

Methods

We analysed routine programme data from eight MSF Ebola Management Centres (EMCs) in Guinea, Sierra Leone, and Liberia from April 1, 2014 to April 15, 2015. EMC teams were asked to systematically report on any pregnant EVD cases admitted. This retrospective review of programmatic data met the MSF Ethics Review Board criteria for exemption from ethics review.

Results

Pregnant patients in EMCs were managed according to an adapted obstetric protocol. Initially, the main emphasis was on the protection of health-care workers and avoidance of invasive procedures. This protocol was later modified: oral rather than intravenous drug management (if possible) was introduced and the possibility of blood transfusion and MgSO4 for eclampsia was added. At April 15, 2015, 31 patients had survived EVD during pregnancy. Few first trimester pregnancies (7/31) were detected; the remainder were equally divided between second and third trimester. All foetuses were stillborn apart from one neonatal death. No health-care workers became infected while caring for this specific population. EVD testing of amniotic fluid after delivery was done by PCR in 10 patients: all were highly positive (cycle threshold [CT] < 25 / +++), even after maternal blood EVD PCR had become negative.

Conclusions

This is the largest case series of pregnant EVD survivors reported. A survival rate is unknown; this can only be reported if pregnancy tests are done systematically at admission. Foetal mortality was 100%. First-trimester pregnancies were underreported, probably due to initial absence of routine pregnancy testing at admission. Amniotic fluid EVD-PCR remained EVD-positive after cure of the patient, which has possible implications for the infectivity of cured pregnant women.