COMBAT EBOLA OUTBREAK

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This report is actually based on the findings based on the rapid outbreak of the Ebola virus in West Africa. This recent outbreak has resulted in quite a number of deaths. Occasionally resulting in at least 1201/672 (56%) human-cases/Deaths (case-fatality rate). In this, report therefore a close consideration of the most recent cases in West African countries (Guinea, Liberia, Sierra Leone and Nigeria). The aim of our study was to analyze the up-to-date findings about genetics, life cycle and ecology and transmission of EBOV. Yes, of course this has created a greater tension to international communities as this virus continues to replicate mortality taking into consideration that it is one of the deadliest in the world with an absence of vaccine. An intensive analysis on the aid from the international health organizations(World Health Organization and The Doctors Without Borders Charity) analyzed precisely, what these organizations have actually done in particular, what measures are under way. Most of all a better understanding of what the Ebola virus is considered in this article.

Key words: Ebola virus, filovirus, RNA viruses, retrovirus.

Introduction. The transmission of viruses from animals to humans was documented the last years [2; 5]. Our previous studies have been presented the possibility of the transmission of the monkey retroviruses Mason-Pfizer and SRV–1 to humans. It was studied a possible mechanism of integration of retroviral DNA in non-permissive host genome [1; 3]. EBOV is one of four Ebola viruses that cause Ebola virus disease (EVD) in humans when transmitted from animal host. The Ebola Hemorrhagic virus was discovered in 1976 and this year 2014 records the worst deadliest virus recorded in history. To date the epidemiology of this virus has affected 1201 individuals of which 672 have died. The aim of our study was to analyze the up-to-date findings about genetics, life cycle and ecology and transmission of EBOV.

The Ebola virus genetics are difficult to study because of its virulent nature. The virus has single-strand RNA genomes and contains seven genes. The life cycle begins with virus attachment to specific cell-surface receptors, fusion with cellular membrane and release of the virus nucleocapsid into the cytoplasm. Ebola virus’ glycoprotein is responsible for the virus’ ability to bind to and infect targeted cells. The viral RNA polymerase transcribes the genes into positive-strand mRNAs, which are then translated into proteins. Newly synthesized structural proteins and genomes self-assemble and accumulate near the cell membrane. Virions bud off from the cell, gaining their envelopes from the cellular membrane. The mature progeny particles then infect other cells to repeat the cycle [4].

Transmission. The Fruit Bats, monkeys and antelopes are considered to be the natural hosts of the virus. Direct contact with bodily fluid of infected people or animals (urine, sweat and blood) is the sauce of infection. If a human is infected then the disease is likely spread from one person to the other, survivors may be able to transmit the disease sexually for nearly two months.

Diagnostic/Symptoms. Antibodies tests can be conducted or the viral RNA, or the virus itself to confirm the diagnosis. The most common diagnostic methods are therefore real-time PCR and ELISA detection of proteins, which can be performed in field or mobile hospitals.

The virus aggressively attacks the blood circulation system and spreads quickly to all organs specifically the Liver (Hepar) and Kidney (Ren, Gk nephros). After contraction of the virus, follows a fever, throat, headache and muscle pains.

There is then typically Nausea, Vomiting and diarrhea along with decreased function of the Ren and Hepar. At this point, some people begin to have problems with bleeding. The virus is fatal in such a way that it kills 50—90% of its infected victims.

The incubation period for this disease is two to twenty days. Unfortunately, there is no vaccine to combat the virus as all possible trials have laboratory failed or still tested only on animals.
Precaution/Prevention. Adequate provision of healthy environment and Sanitation these includes essential washing with chlorine soap. Educating the public/society before outbreaks is effective. Avoid physical contact with infected individuals and visit the doctor in case of familiar symptoms. Provision of clean water, this raises questions in societies where there is a scare of clean water.

Discussion/Conclusions. The health teams have now settled in the eastern Sierra Leone in order to give aid to the affected and try to control the “deadliest contagious disease.” The health teams are from the World Health Organization and the Doctors without Borders Charity. Various organizations, including the Economic community of West African states have donated funds and personnel to help counter the outbreak. The European Commission (EC) helps contain the spread of the virus in Guinea and its neighboring countries. The European Mobile Laboratory Consortium as part of the WHO/GOARN outbreak response deployed a mobile laboratory, capable of performing the molecular diagnosis of viral pathogens in Guinea. Results suggest that the Zaire Ebola virus (EBOV) in Guinea is a different clade than the strains from outbreaks in the Democratic Republic of Congo and Gabon.

Currently the situation in West Africa is spilling out of hand. More lives had been lost and continues to tumble. On 27. July.2014 marks sadly the death of a four-month baby boy, in South East Guinea. My, heartaches as the world had been robbed another asset. Something is wrong somewhere or this is a wake-up call to countries that have not been affected.

REFERENCES