Ebola virus: Ancient virus on a recent outbreak

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ABSTRACT

Ebola virus a very old virus, in reference with the WHO bulletin in 1978 the first cases of ebola virus were reported in 1976 in Zaire, as per the reports 280 deaths and 38 serologically confirmed survivors were recorded. The first onset of symptoms were observed in 5 days after receiving an injection of chloroquine for presumptive malaria, the patient actually had a reoccurrence of his malaria symptoms and was treated for so at yambuku Mission Hospital. Within one week several other patients who received injection for the treatment at YMH also suffered from Ebola hemorrhagic fever, and all the cases which were reported had received injection at the hospital or had close contact with the affected person.

Reported Cases

Ebola virus a very old virus, in reference with the WHO bulletin in 1978 [1] the first cases of ebola virus were reported in 1976 in Zaire, as per the reports 280 deaths and 38 serologically confirmed survivors were recorded. The first onset of symptoms were observed in 5 days after receiving an injection of chloroquine for presumptive malaria, the patient actually had a reoccurrence of his malaria symptoms and was treated for so at yambuku Mission Hospital. Within one week several other patients who received injection for the treatment at YMH also suffered from Ebola hemorrhagic fever [2-10] and all the cases which were reported had received injection at the hospital or had close contact with the affected person.

The virus was so epidemic that the hospital was closed within first four weeks when the symptoms first appeared as 11 of the total 17 staff who nursed the infected patients also died of the disease [11,12]. All ages of both the sexes were affected, mostly women of the age group between 15-29 years of the age had highest incidence of the disease [13-19].

The disease was actually caused by a virus that is morphologically similar to Marburg virus, but immunologically distinct. Marburg virus disease was first identified in 1967 in Yugoslavia and was transmitted from infected monkeys from Uganda [20-28]. Both Ebola virus and Marburg virus causes highly fatal disease and both come from the same family “Filoviridae”. Both the diseases are very rare but can cause dramatic out breaks with high fatality rate [29-35].

Causative Agent
The causative agent of ebola virus was first isolated from the blood of 8-10 suspected cases using Vero cell cultures [36-45]. The vero cell lines were derived from the kidney of a normal, adult, African green monkey. Currently, the Vero cell line is used to produce only one U.S. licensed viral vaccine that is poliovirus vaccine. However “The Center for Biologics Evaluation and Research“ (CBER) is one Center within the Food and Drug Administration, an Agency within the United States Government's Department of Health and Human Services (HHS), had received proposals either in pre-IND or under IND (Investigational New Drug Application) to use Vero cells to produce many other viral vaccines, including live viral vaccines [46-70]. Except the polio vaccine all other licensed vaccines are produced in diploid cell strains. Diploid cultures have a finite lifespan Normal human cells, such as human skin fibroblasts, are one example of diploid cells [71-90]. Continuous cell lines are immortalized cell lines with an infinite lifespan [91-95]. These usually either come from tumor tissue or have been deliberately immortalized or transformed. However, many rodent cell lines spontaneously transform [96-100].

![Ebola virus](image)

**Figure 1: Ebola virus**

**CONCLUSION**

The virus replicates only inside the living cells of other organisms. The virus changes its protein sequence oftenly and become resistant to antibiotics which makes it difficult to control when the disease is epidemic. The ebola virus which has been epidemic in the recent 2014, 2015 cases reported may be same virus reported in Zaire in 1976 and the cases reported on 6th October, 1979 in southern sudan is yet to be known.

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