

Perspective A SciTechnol Journal

Ebola Virus Disease

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Introduction

Ebola virus is fatal viral disease with outbreak in African continent primarily; infection is caused by group of viruses with viral family Filoviridae genes Ebola virus i.e. species Zaire Ebola virus, Sudan virus species Sudan Ebola virus, Tai Forest virus species Tai Forest Ebola Virus, Bundibugyo virus species Bundibugyo Ebola virus these virus effect humans while Reston virus causes infection in primates and pigs. This virus outbreak is considered to be animal-borne from bats, non-animal primates like chimpanzee, monkeys etc.

Transmission

Virus outspread from people by through direct contact with infected person like skin, mucous membrane in nose, mouth, eyes; it is highly contagious virus disease transmitting from blood or body fluids like sweat, feces, vomiting, breast feeding, and semen. Objects like wooden tables, clothes, medical equipment, needles, brushing tools etc. and this virus does not spread through food. This virus can survive on dry surface like doorknobs, and tools which infected person has touched; it can survive for several days at room temperature. Preventive steps like washing hands with soap and alcohol based sanitizers, wearing protective suits around infected person

Tenacity of Virus

The virus stay in area of our body in which it is immunological sites for acute infections like testes, interior of eye, placenta and central nervous system even after the survivor have no infection. After research it is known to be properly sterilized instruments before using again.

Incubation Period

Incubation period is the time when signs and symptoms appear from 2-21 days after getting infected with virus, average of 8-10 days.

Symptoms

The initial symptoms like fever, aches and fatigue, red eyes, skin rashes then when it get severe symptoms like diarrhea, vomiting up of blood, abdominal pain, hemorrhaging, bleeding, bruising, sore throat, chest pain, mental confusion, difficulty in swallowing and breathing.

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Diagnosis

Diagnosis of this virus in early stage is difficult it takes 21 days before onset of symptoms. When the symptoms gets more like tiredness and fatigue person can know the change in body, PCR polymerase chain reaction is commonly used it have ability to detect low level virus in small even in small amount of blood. Low platelet count ELISA (enzyme linked immunosorbent assay) based on antigen captured, RT-PCR (reverse transcription polymerase chain reaction) immunohistochemistry testing.

Treatment

Primarily measures are taken to avoid contamination, drug approved by FDA earlier was combination of three monoclonal antibody then again after some years the second drug was single monoclonal antibodies which are protein acts as natural antibodies avoiding Ebola from binding on virus surface known as glycoprotein, preventing virus from entering person cell. Supportive care is taken like using fluids and electrolytes orally or through IV and medications for blood pressure, vomiting, diarrhea. Providing extra oxygen if patient needs it. Using of condom during sexual intercourse if person get infected earlier.

Complications

Immune weakness lead to major complications like extreme weakness and fatigue, delirium, joint problems leading to difficulty in walking, extreme hair loss , it can turn to be deadly if not treated like coma, shock, severe bleeding, failure of main organs , person may end up in coma.

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