

VIROLOGY LECTURE

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Ebola Hemorrhagic Fever

Viral etiology:

- Ebola virus (1976)
- Named after river in the democratic republic of the Congo (Zaire)
- Family Filoviridae
- ss-RNA genome
- There are four identified subtypes of ebola virus
- Three of the four have caused disease in humans.
 - Ebola - Zaire
 - Ebola – Sudan
 - Ebola – Ivory Coast
- The fourth Ebola – Reston (USA), has caused disease in human primates, but not in humans.


Transmission:

- The animal reservoir for the virus is not known.
- The animal reservoir for the virus seems to reside in the rain forest of Africa and Asia.
- The virus infects human and non-human primates (**monkeys, gorillas and chimpanzees**).
- Person-to-person transmission occurs by direct contact with the blood, secretion, organs or semens of infected person.
- Health care-workers have frequently been infected while attending and caring for patients.
- Handling infected or dead chimpanzees, monkeys and gorillas.

I.P.:

- 2- 21 days

Symptoms:

- Fever
 - Weakness
 - Muscle & joint aches
 - Headache
 - Sore throat
 - Nausea
 - Vomiting
 - Diarrhea
 - Internal & external bleeding
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Prognosis:

- Ebola HF is often fatal disease in humans and non-human primates
- One of the most virulent viral diseases known to human kind.
- Ebola causes death in 50-90% of all clinically ill cases.

Lab. Diagnosis:

- Hemorrhagic fever viruses are classified as bio-safety level four (BSL-4) pathogens.
- Lab. Diagnosis is extremely biohazard and is only conducted under maximum biological containment conditions.
- The two commonly used diagnostic method is
 - Detection of IgM-Ab
 - Isolation of the virus in tissue culture, followed by identification of the isolated virus.

Treatment:

- There is no specific anti-viral drug therapy.
- Treatment is supportive