



Chapare Virus

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Why in News

Researchers from the US Centers for Disease Control and Prevention (CDC) have recently discovered a rare **Ebola-like illness** that is believed to have first originated in **rural Bolivia** in 2004.

- The virus is named Chapare after the province in which it was first observed.
- **Chapare**, is a rural province in the northern region of **central Bolivia**.

Key Points

- **About:**

Chapare Virus belongs to the same **Arenavirus family** that is responsible for illnesses such as the **Ebola virus disease (EVD)**. It causes Chapare Hemorrhagic Fever (CHHF).
- **Vector:**
 - Chapare virus are generally **carried by rats** and can be transmitted through **direct contact with the infected rodent, its urine and droppings, or through contact with an infected person**.
 - A disease vector is any agent which **carries and transmits** an infectious pathogen into another living organism.
- **Symptoms of Chapare Hemorrhagic Fever (CHHF):**
 - Hemorrhagic fever much like Ebola.

Viral hemorrhagic fevers are a severe and life-threatening kind of illness that can **affect multiple organs and damage the walls of blood vessels**.
 - Abdominal pain,
 - Vomiting,
 - Bleeding gums,
 - Skin rash,
 - Pain behind the eyes.

- **Transmission:**

Virus can spread from **person to person**.

- Chapare spreads only through **direct contact** with bodily fluids.
- **Sexually transmission:**

Researchers also found fragments of **Ribonucleic acid (RNA)** associated with Chapare, in the semen of one survivor **168 days** after he was infected.

- **Diagnosis:**

- Chapare virus is **much more difficult** to catch than the **coronavirus** as it is **not transmissible** via the **respiratory route**. Instead, Chapare spreads only through direct contact with **bodily fluids**.
- New sequencing tools will help develop an **RT-PCR test** — much like the one used to diagnose **Covid-19** to help detect Chapare.

- **Treatment:**

- Since there are **no specific drugs** to treat the disease, patients generally receive **supportive care** such as intravenous fluids.

Intravenous therapy is a medical technique that delivers a liquid directly into a person's vein. The intravenous route of administration is commonly used for rehydration solutions or to provide nutrition in those who cannot consume food or water by mouth.

- Maintenance of **hydration**.
- Management of shock through fluid resuscitation.

Fluid resuscitation is the medical practice of **replenishing bodily fluid** lost through sweating, bleeding, fluid shifts or other pathologic processes.
- Pain Relief Medicines
- Transfusions as the supportive therapy that can be administered on patients.

- **People at Risk:**

The disease is also known to be most commonly transmitted in more **tropical regions**, particularly in certain parts of South America where the small-eared pygmy rice rat is commonly found.

- **Mortality Rate:**

- As there are very few cases on record, the mortality and risk factors associated with the illness are **relatively unknown**.
- In the first known outbreak, the only confirmed case was fatal. In the second outbreak in 2019, three out of five documented cases were fatal (**case-fatality rate of 60%**).

- **Recent Outbreak:**

The recent biggest outbreak of the 'Chapare virus' was reported in 2019, when three healthcare workers contracted the illness from two patients in the Bolivian capital of La Paz.

Ebola Virus Disease

- **Ebola Virus Disease (EVD) or Ebola Hemorrhagic Fever (EHF)**, is a viral hemorrhagic fever of humans and other primates caused by ebolaviruses
- **Transmission:**
 - **Fruit bats** of the Pteropodidae family are natural **Ebola virus hosts**.
- **Animal to human transmission:**
 - Ebola is introduced into the human population through **close contact** with the blood, secretions, organs or other **bodily fluids of infected animals** such as fruit bats, chimpanzees, etc.
- **Human-to-human transmission:**
 - Ebola spreads via **direct contact** (through broken skin or mucous membranes) with:
 - Blood or body fluids of a person who is sick with or has died from Ebola.
 - Objects that have been contaminated with body fluids (like blood, feces, vomit) from a person sick with Ebola or the body of a person who died from Ebola.
- **Vaccines:**
 - An experimental Ebola vaccine, called **rVSV-ZEBOV** proved highly protective against EVD.

Source: IE