**FREQUENTLY ASKED QUESTIONS**

**MARBURG VIRUS DISEASE**

1. **What is Marburg virus disease?**

Marburg virus disease (MVD) or formerly known as Marburg haemorrhagic fever, is caused by a filovirus named Marburg virus. Marburg virus is in the same family (i.e. Filoviridae family) as the virus that causes Ebola virus disease.

Marburg virus was first described in two large outbreaks in 1967, in the German cities of Marburg and Frankfurt, and in Belgrade, Serbia. The outbreak was associated with laboratory workers who were exposed to tissues of infected African green monkeys (Cercopithecus aethiops) imported from Uganda.

Subsequently, outbreaks and sporadic cases have been reported in Angola, Democratic Republic of the Congo, Kenya, South Africa (in a person with recent travel history to Zimbabwe) and Uganda.

1. **Who can get Marburg virus disease and how is it transmitted?**

*Rousettus aegyptiacus*, fruit bats of the family Pteropodidae, are considered to be natural hosts of Marburg virus. The natural habitats for the host of the virus are caves and similar structures. As such, miners working in caves inhabited by these bats and visitors to these caves are at risk of infection. The Marburg virus is transmitted to people from fruit bats and spreads among humans through human-to-human transmission.

Marburg virus spreads through human-to-human transmission via direct contact (through broken skin or mucous membranes) with the blood, secretions, organs or other bodily fluids of infected people, and with surfaces and materials (e.g. bedding, clothing) contaminated with these fluids.

Health-care workers have frequently been infected while treating patients with suspected or confirmed Marburg virus disease (MVD). This has occurred through close contact with patients when infection control precautions are not strictly practiced. Transmission via contaminated injection equipment or through needle-stick injuries is associated with more severe disease, rapid deterioration, and, possibly, a higher fatality rate. Burial ceremonies that involve direct contact with the body of the deceased can also contribute to the transmission of Marburg virus. People remain infectious as long as their blood contains the virus.

1. **What are the signs and symptoms of Marburg virus disease?**

The incubation period (interval from infection to onset of symptoms) varies from 2 to 21 days. Illness caused by Marburg virus begins abruptly, with high fever, severe headache and severe malaise. Muscle aches and pains are a common feature. Severe watery diarrhoea, abdominal pain and cramping, nausea and vomiting can begin on the third day. Diarrhoea can persist for a week. The appearance of patients at this phase has been described as showing “ghost-like” drawn features, deep-set eyes, expressionless faces, and extreme lethargy. In the 1967 European outbreak, non-itchy rash was a feature noted in most patients between 2 and 7 days after onset of symptoms.

Many patients develop severe haemorrhagic manifestations between 5 and 7 days, and fatal cases usually have some form of bleeding, often from multiple areas. Fresh blood in vomitus and faeces is often accompanied by bleeding from the nose, gums, and vagina. Spontaneous bleeding at venepuncture sites (where intravenous access is obtained to give fluids or obtain blood samples) can be particularly troublesome. During the severe phase of illness, patients have sustained high fevers. Involvement of the central nervous system can result in confusion, irritability, and aggression. Orchitis (inflammation of one or both testicles) has been reported occasionally in the late phase of disease (15 days).

In fatal cases, death occurs most often between 8 and 9 days after symptom onset, usually preceded by severe blood loss and shock.

1. **How is Marburg virus disease diagnosed?**

It can be difficult to clinically distinguish MVD from other infectious diseases such as malaria, typhoid fever, shigellosis, meningitis and other viral haemorrhagic fevers. Only a specialized laboratory blood test can confirm the presence of MVD. There is no test available to detect infection while a person is in the incubation period, so MVD can only be diagnosed once signs and symptoms appear, as is the case with most viral infections.

1. **How is Marburg virus disease treated?**

The Food and Drugs Authority (FDA) has not approved any vaccines or antiviral treatments for MVD. However, supportive care – rehydration with oral or intravenous fluids – and treatment of specific symptoms, improves survival. However, a range of potential treatments including blood products, immune therapies and drug therapies are currently being evaluated in clinical trials.

1. **How are Marburg virus disease outbreaks prevented?**

## The following are several ways to prevent outbreaks and reduce transmission of Marburg virus disease:

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* People should avoid or spend only the required amount of time in mines or caves where fruit bats thrive, such as mine workers or tourists on cave excursions. During work or research activities or tourist visits in mines or caves inhabited by fruit bat colonies, people should wear gloves and other appropriate protective clothing (including masks). All animal products (blood and meat) should be thoroughly cooked before consumption.
* Contact with individuals or remains suspected of having MVD should be avoided, and patients and burials should be handled by qualified health care staff and burial teams. Regular hand washing should be performed after visiting sick relatives in hospital.
* The World Health Organization recommends that male survivors of Marburg virus disease practice safer sex and hygiene for 12 months from onset of symptoms or until their semen twice tests negative for Marburg virus.

1. **Do we have** **Marburg virus disease outbreak in Ghana?**

Ghana has reported the first-ever confirmed cases of Marburg virus disease in July 2022.

The Ghana Health Service has responded swiftly to the outbreak with immediate and decisive action with containment measures in response to the outbreak. This is good because without immediate and decisive action, Marburg can easily get out of hand.

It is only the second time the zoonotic disease has been detected in West Africa. Guinea confirmed a single case in an outbreak that was declared over on 16th September 2021, five weeks after the initial case was detected.

1. **Do people ever recover from Marburg virus disease?**

Yes. Hundreds of people recover from previous outbreaks of Marburg. People suspected to have contracted the disease if taken to the hospital quickly have a far greater chance of survival. Every effort must be made to get sick people to the hospital.

1. **Can a person who recovered from Marburg virus disease get the disease again?**

There is some protection after getting Marburg virus, but current evidence shows that it is not life. So, the person can get infected again

**Additional Information**

More facts about Marburg virus disease are available from:

World Health Organization. Marburg virus disease, Key Facts, 2021 August 7 [Cited 2022 July 28]. Available from <https://www.who.int/news-room/fact-sheets/detail/marburg-virus-disease>

World Health Organization. Marburg virus – Ghana, 2022 July 22, [Cited 2022 July 28] Available from <https://www.who.int/emergencies/disease-outbreak-news/item/2022-DON402>