

RIFT VALLEY FEVER OUTBREAKS IN MAURITANIA IN 2022

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Mauritania has witnessed multiple occurrences of Rift Valley Fever (RVF) outbreaks over time. The initial outbreak occurred in 1987, in the Trarza region bordering the Senegal River, while the most recent outbreaks were documented in 2020 and 2022. The aim of this work is to describe the RVF outbreaks occurring in Mauritania in 2022.

The first signs of the RVF outbreak in 2022 were observed on August 17 during the raining season, with the detection of animal cases, particularly in camels. Abnormalities such as abortions in camels and the presence of IgM antibodies in sentinel herds signaled the onset of the outbreak. This initial detection in animals preceded the detection of human cases by at least two weeks, which was an unusual pattern compared to previous outbreaks. In the 2022 outbreak, RT-PCR analysis was carried out on 564 camel serum samples, uncovering 68 positive cases. Other 1107 samples were collected from all ruminants, including 999 from small ruminants, 105 from cattle, and 3 from gazelle. Out of these, 161 samples from small ruminants and 5 from cattle tested positive for IgM ELISA, while the 3 gazelle samples tested negative. The outbreak resulted in 40 fatalities among camels, excluding abortion rates among pregnant females. There was a notably high mortality rate among young sheep and goats, along with a significant incidence of abortion among small ruminants.

Despite the early sharing of results from the sentinel herd via the One Health network, the RVF outbreak in 2022 resulted in 47 confirmed cases among humans. Sadly, this outbreak led to 23 reported fatalities, shedding light on the severity of the disease and its potential impact on human health. The distribution of cases highlighted the widespread nature of the outbreak and the challenges in control.

In addition to animal and human cases, surveillance efforts also targeted mosquitoes, identifying several species as carriers of the RVF virus. *Aedes vexans*, *Mansonia uniformis*, and *Culex quinquefasciatus* were among the mosquitoes found to be infected with the RVF virus, indicating the role of these vectors in the transmission of the disease.

In response to the RVF outbreaks, various interventions were implemented: i) Veterinary teams were mobilized to conduct animal spraying in priority regions where cases have been identified. ii) Joint missions involving the Ministry of Health, Ministry of Environment, and Ministry of Livestock and Animal Production were deployed to raise awareness about haemorrhagic fevers in affected and at-risk regions. iii) Continuous communication regarding risks and community engagement strategies were employed. iv) Blood donors were identified to ensure availability in case of need.

In conclusion, the RVF outbreaks in Mauritania in 2022 highlighted the complex interplay between animal, human, and environmental factors in the transmission and spread of zoonotic diseases, emphasizing the importance of a coordinated One Health approach to mitigate such outbreaks and protect public health.