

The Current Status of Epidemiology, Diagnosis, Treatment and Vaccine Development of Rift Valley Fever

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Abstract

Rift Valley fever (RVF) is an ecologically complex emerging zoonotic, arboviral disease transmitted by a broad spectrum of mosquito species to animals (domestic and wild ruminants and camels), causing high rates of neonatal mortality and abortion. Human infections result in a wide variety of clinical outcomes, ranging from self-limiting febrile illness to life-threatening hemorrhagic diseases and miscarriages. Since its discovery in Kenya in 1930, RVF has caused many outbreaks in the African continent, Indian Ocean, and Middle East, with major impacts on human and animal health and severe recurring economic losses. Currently, therapeutics and vaccines are unavailable for humans. Therefore, RVF is considered a high-priority pathogen according to the WHO R&D Blueprint. The WHO R&D Blueprint focuses on and catalyzes international efforts to ensure the coordinated development of medical countermeasures. In this article, we summarized relevant information on international RVF epidemics, pathogenesis and clinical manifestations, diagnosis, the status of therapeutics and vaccine development, and identifies knowledge gaps in the challenges of preventing and controlling RVF, which can provide references for future epidemic prevention policies.

Keywords: Rift Valley fever, arboviral disease, zoonotic infectious disease

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