

Causes - 4 types of RNA virus with lipid envelopes:

Arenaviridae	Disease	Origin	Vector	Incubation days
Arenavirus	Lassa Fever	Africa	Rodent + other	5-16
Junin	Argentinean HF	S. America	Rodent	7-14
Macupo	Bolivian HF	S. America	Rodent	9-15
Sabia	Brazilian HF	S. America	Rodent	7-14
Guanorito	Venezuelan HF	S. America	Rodent	7-14
Bunyaviridae	Disease	Origin	Vector	Incubation days
Plebovirus	Rift Valley Fever	Africa	Mosquito	2-5
Nairovirus	Crimean Congo HF	Europe, Asia, Africa	Tick	3-12
Hantavirus	Hanta Fever	Asia, Europe	Rodent	9-35
Filoviridae	Disease	Origin	Vector	Incubation days
Filovirus	Marburg and Ebola	Africa	Unknown/direct	3-16
Flaviviridae	Disease	Origin	Vector	Incubation days
Flavivirus	Yellow Fever	Tropical Africa, S. America	Mosquito	3-6
Flavivirus	Dengue Fever	Asia, Americas, Africa	Mosquito	3-5 for Dengue, ? for Dengue HF

Presentation

- Initially flushing, conjunctivitis, and petechial haemorrhages. Also fever and myalgia.
- Later, obvious mucous membrane haemorrhage, hypotension, shock and visceral necrosis.
- Multisystem organ failure can involve the haematopoietic system, CNS, and lungs.
- Hepatic involvement may be seen with Ebola, Marburg, RVF, CCHF, and yellow fever.
- Renal failure with oliguria is common in Hantavirus infection and may be seen in others.
- Bleeding is marked with Ebola, Marburg, CCHF, and the S. American arenaviruses.

Investigations

Bloods: FBC (↓HB, ↓plt), coag/DIC screen, LFTs, UEC (?ARF), serology & PCR for viruses.

Management

- Multi-agency response to isolate/control outbreak
- Barrier nursing and full PPE.
- Supportive: O₂, IVF, and sometimes even blood products.
- Avoid IMI and aspirin because of bleeding.
- Arenaviruses and bunyaviruses (particularly Lassa fever and Hantavirus infection with renal failure) may respond to ribavirin.

Complications

These include retinitis, orchitis, hepatitis, transverse myelitis, uveitis, deafness (Lassa fever). Miscarriage is also common. Renal insufficiency occurs in HFRS infection.

Prognosis

Mortality rates: Dengue (<10%), Lassa fever (25%), Ebola-Zaire (90%).

Prevention

- Education & control programmes for rodents & mosquitoes are required in endemic areas.
- Training of HCW in isolation, contact tracing, & handling infectious laboratory specimens.
- Yellow fever vaccine is very effective and safe, but only one available.