Clinical Pathway: Viral Hemorrhagic Fever

Patient presents with:
> Fever ≥101°F (38.3°C) of <3 wk duration
> At least two of the following:
  --Hemorrhagic or purple rash
  --Epistaxis
  --Hematemesis
  --Hemoptysis
  --Blood in stools
  --Petechiae in nondependent areas
> No predisposing factors for hemorrhage and no established alternative diagnoses

**Note:** Sudden appearance of multiple patients with acute onset of characteristic illness suggests common source exposure such as would be seen with a bioterrorist attack.

- Report immediately to local and/or state health department

  - If arenavirus or bunyavirus infection confirmed, administer ribavirin therapy for 10 days
  - If VHF ruled out, or if flavivirus or filovirus infection confirmed, discontinue ribavirin

  - Initiate appropriate infection control practices ([see page 2](#))
  - Send clinical specimens for VHF testing directly to CDC
  - Initiate ribavirin therapy ([see page 3](#))

- Identify close and high-risk contacts ([see page 4](#)) and place them under medical surveillance

  - If VHF ruled out for index patient, discontinue surveillance
  - If contacts have no fever or symptoms suggestive of VHF for 21 days after last exposure, discontinue surveillance
  - If fever ≥101°F (38.3°C) or other symptoms suggestive of VHF develop in contacts, initiate treatment, evaluation, and infection control practices as appropriate

**Abbreviations**

CDC, Centers for Disease Control and Prevention
VHF, viral hemorrhagic fever

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<th>Type of Precaution</th>
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| Airborne Precautions                     | Place the patient in a private room with:  
- Negative air pressure  
- 6 to 12 air changes per hour  
- Restricted access of nonessential staff and visitors                                                                                                                                 |
| VHF-specific personal protective equipment* | Provide the following PPE for healthcare providers:  
- N-95 respirator or powered air-purifying respirator  
- Double gloves  
- Impermeable gowns  
- Face shields  
- Goggles for eye protection  
- Leg and shoe coverings                                                                                                                                 |
| Hand hygiene                              | All healthcare providers should adhere to the following practices:  
- Clean hands prior to donning PPE for patient contact  
- After patient care, remove gloves, gown, and leg and shoe coverings, and immediately clean hands  
- Clean hands prior to the removal of facial protective equipment to minimize exposure of mucous membranes with potentially contaminated hands  
- Clean hands again after all PPE is removed                                                                                                                                 |
| Handling of medical equipment             | Dedicate medical equipment such as:  
- Stethoscopes  
- Blood pressure cuffs  
- Glucose monitors  
- Point-of-care analyzers (if available)                                                                                                                                 |
| Environmental decontamination             | Environmental surfaces, inanimate contaminated objects, or contaminated equipment should be disinfected with an EPA-registered hospital disinfectant or a 1:100 dilution of household bleach using standard procedures  
- Contaminated linens should be incinerated, autoclaved, or placed in double (ie, leak-proof bags) bags at the site of use and washed without sorting in a normal hot water cycle with bleach  
- Hospital housekeeping staff and linen handlers should wear appropriate PPE when handling or cleaning potential contaminated material or surfaces                                                                                                                                 |
| Patient cohorting                         | If multiple patients with suspected VHF are admitted to one healthcare facility:  
- Cohort them in the same part of the hospital to minimize exposure to other patients and healthcare workers  
- Dedicate staff trained in appropriate infection control practices to care for them  
- If large number of patients must be cared for in 1 facility, then recommendations to place all patients under Airborne Precautions (see above) may need to be modified                                                                 |

*The most common forms of exposure involve accidental parenteral inoculation; therefore, particular attention should be paid to handling of needles and sharp instruments.

Abbreviations: EPA, Environmental Protection Agency; PPE, personal protective equipment; VHF, viral hemorrhagic fever.