**SIMIAN HEMORRHAGIC FEVER**

<table>
<thead>
<tr>
<th>Animal Group(s) Affected</th>
<th>Transmission</th>
<th>Clinical Signs</th>
<th>Severity</th>
<th>Treatment</th>
<th>Prevention and Control</th>
<th>Zoonotic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural host: Patas monkey (<em>Erythrocebus patas</em>) and other African primates.</td>
<td>Direct and indirect contact with infected animals, secretions or fomites.</td>
<td>Anorexia, lethargy, diarrhea or melena with frank blood, facial edema, petechia, DIC.</td>
<td>Fatal in macaques but no clinical disease in natural hosts.</td>
<td>Isolation of unaffected animals.</td>
<td>Testing of African primates.</td>
<td>No</td>
</tr>
</tbody>
</table>

**Fact Sheet compiled by:** Thomas P. Meehan; updated by Dawn Zimmerman  
**Sheet completed on:** 30 June 2011; updated 15 August 2013  
**Fact Sheet Reviewed by:** Kimberlee B. Wojick; Meredith M. Clancy

**Susceptible animal groups:** Captive rhesus macaques (*Macaca mulatta*) were affected during an “explosive” outbreak in the index case in 1964. This and subsequent outbreaks in macaques have apparently resulted from contact with or iatrogenic transmission from asymptomatic captive African monkeys. African monkey species including Patas monkey (*Erythrocebus patas*), vervet monkeys (*Cercopithecus aethiops*) and baboons (*Papio* spp.) are the apparent natural reservoirs. Red colobus monkeys and red-tailed guenons also have been identified as natural hosts for SHFV variants. The aberrant species affected are macaques including rhesus macaque (*Macaca mulatta*), bonnet macaque (*M. radiata*), cynomolgus macaque (*M. fascicularis*), stump-tailed macaque (*M. arctoides*), Assam macaque (*M. assamensis*) and Southern pig-tailed macaque (*M. nemestrina*).

**Causative organism:** SHF-Virus (genus *Arterivirus*, family *Arteriviridae*).

**Zoonotic potential:** None; however, the virus is being researched for species jump potential due to the presence of highly divergent SHFV variants

**Distribution:** Natural hosts in Africa but consideration for captive animals worldwide.

**Incubation period:** 2-9 days.

**Clinical signs:**

**Natural hosts:** asymptomatic

**Macaques:** Although these aberrant hosts can be asymptomatic, in clinical animals, fever, depression, facial edema, anorexia, adipsia, dehydration, proteinuria, cyanosis, skin petechiae, melena, epistaxis, DIC, and retrobulbar hemorrhages can present. Mortality ranges widely at 11-100% (64% in recent study) but death occurs in 10-15 days.

**Post mortem, gross, or histologic findings:** Petechial hemorrhages on mucosal and serosal surfaces, hemorrhage of proximal duodenum, splenomegaly, splenic lymphoid follicles ringed with zone of hemorrhage, multi-organ necrosis, vasculitis and hemorrhage, intravascular fibrin, fibrin in spleen, lymphohistiocytic meningoencephalitis.

**Diagnosis:** Real time RT-PCR, ELISA, DIA.

**Material required for laboratory analysis:** blood, serum.

**Relevant diagnostic laboratories:** Zoologix  
9811 Owensmouth Ave, Suite 4  
Chatsworth CA 91311  
818-717-8880
**SIMIAN HEMORRHAGIC FEVER**

<table>
<thead>
<tr>
<th>BioReliance Corp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>14920 Broschart Rd.</td>
</tr>
<tr>
<td>Rockville, MD 20850-3349</td>
</tr>
<tr>
<td>301-738-1000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VRL-San Antonio, USA</th>
</tr>
</thead>
<tbody>
<tr>
<td>P.O. Box 40100/ 7540 Louis Pasteur, Suite 200</td>
</tr>
<tr>
<td>San Antonio, Texas 78229</td>
</tr>
<tr>
<td>877-615-7275</td>
</tr>
<tr>
<td><a href="http://www.vrlsat.com/catalog/specimen/45">http://www.vrlsat.com/catalog/specimen/45</a></td>
</tr>
</tbody>
</table>

**Treatment:** None.

**Prevention and control:** Testing of African primate species for antibodies, separation of African primates and macaques in captive settings.

**Suggested disinfectant for housing facilities:** Disinfectants effective against Arteriviridae: quaternary ammonium and glutaraldehyde mixture (Synergize™, Preserve International) 0.8%, potassium monopersulfate (Virkon-S™, DuPont Animal Health) 1.0%.

**Notification:** None.

**Measures required under the Animal Disease Surveillance Plan:** Currently none.

**Measures required for introducing animals to infected animal:** Not recommended.

**Conditions for restoring disease-free status after an outbreak:** Depopulation of affected macaque group and premise disinfection.

**Experts who may be consulted**
While this disease is not zoonotic, similarities to other hemorrhagic diseases of primates should indicate consultation with:
Centers for Disease Control and Prevention (CDC) Division of Global Migration and Quarantine
May be contacted 24 hours/day through the CDC emergency operations center (770-488-7100).

**References**


