

## Images in Infectious Diseases

# Herpes simplex virus transmission following brown howler monkey (*Alouatta guariba*) bite

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The subfamily Alphaherpesvirinae includes herpes simplex virus types 1 and 2 (HSV-1 and HSV-2, respectively) and herpes virus B (HVB)<sup>1</sup>. In their primary hosts, they cause low-virulence infections, but can confer devastating effects when other animal species are infected<sup>1,2</sup>. A 24-year-old woman was bitten by a healthy young brown howler monkey (*Alouatta guariba*). She presented with a vesicle where she had been bitten, along with local pain. It regressed spontaneously but recurred many times (**Figure 1**). She tested immunoglobulin (Ig)G-positive and IgM-negative for HSV-1 and HSV-2. Vesicle fluids were aspirated for virus culture and polymerase chain reaction assays, which identified HSV-2. The patient was successfully treated (**Figure 2**).

Humans are natural hosts to HSV-1 and HSV-2. Meanwhile, nonhuman primates can present with severe repercussions<sup>1,2</sup>. Old World primates are natural HVB reservoirs<sup>2,3</sup>. HVB is often lethal in humans and can be transmitted after a bite from an infected monkey<sup>3</sup>. On the inoculation site, skin lesions similar to those of herpes simplex may occur<sup>2,3</sup>. Myeloencephalitis with an 80% lethality rate is reported<sup>1,2,3</sup>. The possibility of it being a case of HBV transmitted by a New World primate was considered. The case described herein is rare: transmission of a human virus by a wild animal that was surprisingly asymptomatic. The monkey was possibly infected with HSV-2 after contact with its previous human owner. Animals harboring human viruses can lead to serious outcomes, as humans exposed to animal viruses can exhibit unpredictable results, emphasizing the importance of biosafety practices in handling wild animals.

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**FIGURE 1:** Vesicles and pustule over an erythematous basis on the back of the patient's left hand, where she had experienced the bite, associated with significant neural pain that spread to the arm.



**FIGURE 2:** Treatment containing valacyclovir (1 g) every 8 hours for 7 days resulted in fast remission of the skin lesions and reduction in pain.

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