The occurrence of elephant endotheliotropic herpesvirus in captive Asian elephants (*Elephas maximus*): first case of EEHV4 in Asia.


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**Abstract**
Elephant endotheliotropic herpesvirus (EEHV) is a type of herpesvirus that causes acute hemorrhagic disease in Asian elephants (*Elephas maximus*) and is often fatal, especially in calves. This study describes the postmortem evaluation of two captive-born Asian elephants (2 and 3 yr of age, respectively) diagnosed with EEHV in Thailand. Both elephants presented only mild depression, lethargy, and anorexia before death within 24 hr of symptom onset. Necropsies were performed, and tissue samples were tested for EEHV viral presence using polymerase chain reaction. Molecular and phylogenetic evidence illustrated two types of EEHV, which were closely related to EEHV1A in Case 1 and EEHV4 in Case 2. Pathologic findings differed between the cases. More specific organ tropism was found in Case 1, where mainly the cardiovascular system was affected. In contrast, in Case 2, hemorrhages were noted in most organs, including in the gastrointestinal, respiratory, and cardiovascular systems. This report is the first to document EEHV4 in Asia and the second case of this strain to be identified in an elephant worldwide.

**Keywords**
Asian elephant; elephant endotheliotropic herpesvirus; *Elephas maximus*; pathology

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