SUSCEPTIBILITY OF OPENBILL STORKS (ANASTOMUS OSCITANS) TO HIGHLY PATHOGENIC AVIAN INFLUENZA VIRUS SUBTYPE H5N1

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Abstract. This investigation detailed the clinical disease, gross and histologic lesions in juvenile openbill storks (Anastomus oscitans) intranasally inoculated with an avian influenza virus, A/chicken/Thailand/vsmu-3 (H5N1), which is highly pathogenic for chickens. High morbidity and mortality were observed in openbill storks inoculated with HPAI H5N1 virus. Gross lesions from infected birds were congestion and brain hemorrhage (10/20), pericardial effusions, pericarditis and focal necrosis of the cardiac muscle (2/20), pulmonary edema and pulmonary necrosis, serosanguineous fluid in the bronchis (16/20), liver congestion (6/20), bursitis (5/20), subcutaneous hemorrhages (2/20) and pinpoint proventriculus hemorrhage (2/20). Real time RT-PCR demonstrated the presence of viral RNA in organs associated with the lesions: brain, trachea, lungs, liver, spleen and intestines. Similar to viral genome detection, virus was also isolated from these vital organs. Antibodies to influenza virus detected with a hemagglutination inhibition test, were found only in the openbill storks who died 8 days post-inoculation.

Keywords: openbill storks, avian influenza virus, H5N1, susceptibility, HPAI

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