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Authors: TANTAWI, H.H., AL SHEIKHLY, S., and HASSAN, F.K.

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AVIAN POX IN BUZZARD (*Accipiter nisus*) IN IRAQ

H.H. TANTAWI, S. AL SHEIKHLY and F.K. HASSAN, Department of Microbiology, College of Veterinary Medicine, Baghdad University, Iraq.

Abstract: Avian pox virus was isolated from pox lesions on the beak and feet of a buzzard (*Accipiter nisus*). The virus was not lethal to chicken embryos and was not pathogenic to chickens and pigeons.

INTRODUCTION

Pox infection among falcons has been reported in England in birds imported from the Arabian gulf area. Attempts, however, to isolate the causal virus by egg inoculation were unsuccessful.^{2,3} Recently an avian pox virus was isolated and identified from saker falcons (*Falco cherrug*) in the Arabian gulf.⁶

In Iraq, pox infection is enzootic among domestic, caged and captive birds.⁵ This short communication is to report pox infection in a buzzard (*Accipiter nisus*) in Iraq.

CASE HISTORY

On 20 March 1979, a young male buzzard was admitted to the Department of Pathology of this College. Examination revealed scabs and firm pox-like lesions on the face around beak and eyes, as well as small plaques with dark-brown scabs raised above the skin of the feet. No lesions could be seen in the buccal mucous membrane nor in the upper respiratory tract. The bird was in good physical condition.

Virus isolation and identification

Scrapings of dried scab material were collected in 50% buffered glycerol. Virus isolation was attempted by inoculation of the chorioallantoic membrane (CAM) of developing chicken embryos and subsequent incubation at 35 and 37 C. Primary cultures of chicken embryo fibroblast (CEF) cells were also used for isolation of the virus.

Identification of the isolate as a pox virus was done morphologically using electron microscopy and the negative staining technique. Serologic identification was carried out using agar gel immunodiffusion test with antisera against fowlpox and pigeon pox viruses. The susceptibility of chickens and pigeons to the isolated virus was tested using 10 four-week-old chickens and 5 three-week-old pigeons which had no previous history of avian pox infection. Birds were kept under daily observation for 15 days. The hemagglutinating activity of the virus was tested against erythrocytes of chickens and pigeons.

RESULTS AND DISCUSSION

A virus was isolated by inoculation of the CAM. It induced edematous thickening of the membrane at the site of inoculation without discrete lesions when the inoculated embryos were incubated at 37 C for 5-6 days. However, at 35 C, by the fourth day postinoculation the virus induced small red and white plaques raised over the membrane surface. The virus was not lethal to the inoculated embryos. By the fourth day postinoculation the virus had induced a few foci of rounded cells in CEF primary cultures. Further passages of the virus in CEF did not increase the cytopathic effect (CPE). Different viral preparations (from skin lesions of the naturally infected bird, and a suspension of the infected CAM) failed to agglutinate chicken and pigeon erythrocytes (RBCs). Electron micro-

scopy of the negatively stained preparations prepared from the infected CAM revealed typical pox virions. The virus particles appeared brick-shaped. A few virions were oval, with diameters of 260 and 280 nm.

The virus was not pathogenic to chickens and pigeons inoculated subcutaneously and into the feather follicles.

The virus isolated from this case is of interest, because it failed to grow on the CAM at 37 C for four successive blind passages and failed to induce macroscopic pox lesions. This differen-

tiates it from the characteristics already known for avian pox viruses.⁵ The optimum temperature for growth of this virus on the CAM was 35 C. The isolate also differed from the peacock pox virus recently isolated in Iraq, as the latter grew easily on the CAM at 37 C without the need for adaptation and it was pathogenic to chickens and pigeons.³ The buzzard strain did not affect chickens and pigeons; therefore it could not be a possible source of infection for domestic birds. The causal agent of pox infection in the buzzard might be an avian pox virus of separate identity.

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