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Introduction

Egg drop syndrome '76 (EDS'76), which was first seen in 1976, is caused by an adenovirus which is unrelated to subgroups I and II of avian adenoviruses. The condition EDS'76 was first seen in Holland and a haemagglutinating adenovirus was isolated. This virus is principally transmitted vertically through the egg with the virus remaining latent in pullets until they come into lay. Antibodies to EDS'76 could not be found prior to 1974 and the widespread distribution of the virus and antibodies against it in duck flocks suggests that this EDS'76 was originally a duck virus.

Epidemiology

EDS'76 virus has been isolated in many countries and serological evidence of infection with this virus has been seen in several other countries.

Although disease outbreaks have been recorded in laying hens, the natural hosts for this virus are ducks and geese and antibodies to the virus are widespread in these two avian species. The virus has been isolated from healthy ducks.

When infection enters a laying flock of any age egg production is affected but it is thought that problems in early (peak) lay could be due to the reactivation of infection which occurred in rear.

EDS'76 transmission

In the original, classic, form of the disease very few hens and so very few embryos were infected, although at hatch the spread of virus was efficient. These chicks went through with a latent (or hidden) infection until they came into lay when the virus was then reactivated and rapidly spread.

In an infected flock both normal and abnormal eggs are contaminated on their shells. This leads to contamination of egg trays. Droppings also contain the virus but faecal excretion is intermittent. The infection can also be transmitted by contaminated needles.

Lateral spread of infection is slow and can take three months to spread through a cage house. Spread of virus between birds on litter is usually faster.