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119 – Goose polyomavirosis

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Introduction

Haemorrhagic enteritis nephritis of geese is a significant disease of European geese and has also been known as 'late type of Derzsy's disease' or 'young geese disease'. The more technically correct name is goose polyomavirosis. Haemorrhagic enteritis nephritis of geese was first diagnosed in Hungary in 1969. It was associated with treating flocks with serum from convalescent flocks that had had Derzsy's disease to give them passive immunity. It was not until the late 1990s that the cause was found to be a polyomavirus – goose haemorrhagic polyomavirus – and that ducks are often a healthy carrier of the virus.

Geographical distribution

This disease has only been described in Hungary, Germany and France, although it probably does occur elsewhere. The disease tends to occur in the winter months.

Transmission

Significant amounts of virus are shed via the faeces of infected geese and ducks, which then spread the infection directly or indirectly. Vertical transmission has not been confirmed but could occur. The incubation period is age dependent, being 6-8 days in day old goslings and up to 15 days in three week old birds. Viral infection after four weeks of age typically results in non-clinical infections.

The disease

It is typically seen in 4-10 week old goslings and morbidity ranges from 10-80%. Death is the most common outcome. Clinical signs, which only last a few hours before death, include sitting alone and coma. In chronic cases lameness is seen. Post mortem findings include subcutaneous oedema, ascites, nephritis and sometimes a haemorrhagic enteritis. Birds dying following the chronic form of the disease show visceral gout and urates in their joints. Haemorrhagic foci are to be observed in most tissues.

Diagnosis

Diagnosis is on clinical signs, post-mortem findings and detecting the causative virus by PCR. In subclinical cases diagnosis is by blood testing and/or PCR. The differential diagnosis should include goose parvovirus infection. The disease can be masked by Derzsy's disease.

Control

Control by disinfection following the complete removal of faecal material. Vaccination of breeders can be used to provide maternal immunity in the goslings and inactivated vaccines have been used in goslings themselves. A subunit vaccine has also been successfully used.

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