

Viral diseases of birds

Welcome back to the world of birds. Let's get to know more in detail the most important viral diseases that affect them.

Most viral infections which must be notified to the OIE affect the respiratory tract and often cause high mortalities in farms. Such is the case of infectious bronchitis and laryngotracheitis, or turkey rhinotracheitis. Special mention deserves avian influenza, especially the high pathogenicity variants, which constitute a health emergency.

Among the infections that affect the central nervous system, currently only one is notifiable, Newcastle disease. But there are other, such as Marek's disease or avian encephalomyelitis. In addition, there are encephalitis transmitted by mosquito bites that can lead to sporadic outbreaks in turkey, ducks or pheasants farms. Wild birds act as natural reservoirs of these viruses. They have unapparent infections which do not cause morbidity or mortality.

In many cases, viral infections are systemic infections, affecting many organs and the vascular system. And sometimes they cause immunosuppression. Such is the case of Gumboro disease or infectious bursitis, retroviral infections or infectious anaemia of chickens. Other systemic diseases are duck hepatitis and enteritis, caused by two viruses of different families.

The main clinical signs that may cause suspicion of a viral infection are: In the case of respiratory diseases: ocular-nasal discharge, cough and sneezing, breathing through an open mouth, dyspnoea and breathing noise. In infections affecting the CNS we can observe paralysis of the legs or the wings, abnormal head and neck positions and prostration.

Gastrointestinal infections are accompanied by diarrhoea and lack of appetite.

When infections are systemic generalized bleeding may occur, as well as necrosis, weight loss and weakness. In some infections there is also immunosuppression. It is frequent to see a decrease in the egg production.

Let's learn more in detail about two examples of respiratory infections, Newcastle disease, in which high virulence strains may appear. And duck enteritis, an infection that also causes important outbreaks in wild birds.

Infectious bronchitis, caused by a Coronavirus, and infectious laryngotracheitis, caused by a Herpesvirus, are two notifiable respiratory infections that have a worldwide distribution. In both cases the transmission is due to respiratory secretions and faeces, which facilitates the spread of the virus also through food, water or farm equipment.

Mortalities may be high, up to 50% in the case of infectious laryngotracheitis, and many animals, although they do not die, they show a higher or lower reduction in the production of eggs, which in both cases originates considerable economic losses in the affected farms.

Newcastle Disease is an example of a systemic infection, which affects mainly chickens a few weeks old. They present respiratory, digestive or nervous signs and it also affects the eggs production. The virus is transmitted similar to the previous infections. The disease has been controlled in many countries and is currently considered endemic in most of Asia, Africa and some countries of Central America and South America. The main problem lies in the existence of some highly virulent strains which can lead to 100% mortality and which are the ones to be notified.

The highly virulent strains have been isolated from cormorants, pigeons and psittacines, which are currently considered reservoirs of these strains and potential sources of contagion.

The interrelation between wild and domestic birds becomes especially important in the case of some viral infections, such as bird flu, which, due its importance, we will leave it for another video. But there are other lesser known infections, such as duck enteritis, which affects wild or domestic waterfowl. The infection, caused by a Herpesvirus, is disseminated through faeces and the virus can remain viable for weeks in the environment, which may constitute a source of contagion for poultry. The most important measures for the prevention and control of viral diseases in birds focus on the correct biosecurity measures and adequate vaccination plans against active pathogens in each region. Vaccines licensed against many of these diseases include attenuated live and inactivated vaccines, which can be administered by aerosols, in the drink water or individually in injectable suspension or eye drops.

Knowing the viruses that affect birds is a very important step to try to protect them.

Keep learning with us!