

Grâce au soutien financier de la FCI, les recherches entamées à l'Université de Liège, ont permis de mieux comprendre l'infection par le circovirus du pigeon (PiCV) et notamment en ce qui concerne le mode de transmission du virus. Ces travaux étaient nécessaires avant d'aborder la mise au point d'un vaccin. Deux publications scientifiques ont été écrites dont voici les résumés.

New data on the transmission of pigeon circovirus

Nineteen racing pigeons aged from one to five years were examined post-mortem. PCR tests showed that the spleens of 16 of them were positive for pigeon circovirus, the livers of six were positive, and blood from one of them was positive for the virus. Five of 44 embryos in embryonated eggs collected from three lofts were positive by PCR, but swabs taken from the crops of 64 adult birds which were feeding one- to 10-day-old squabs in these three lofts were negative for the viral DNA.

New data on the transmission of pigeon circovirus

J.P. Duchatel, D. Todd, A. Curry, J.A. Smyth, J.C. Bustin, H. Vindevogel. The Veterinary Record, October 1, 2005.

Observations on detection, excretion and transmission of pigeon circovirus in adult, young and embryonic pigeons

Infections with pigeon circovirus (PiCV) occur in young racing pigeons and pigeons raised for meat production and have been reported worldwide, but relatively little is known about the disease induced by PiCV infection. The aim of this study was to investigate how PiCV is transmitted. Using a sensitive polymerase chain reaction (PCR) test, the presence of PiCV was investigated in a wide range of samples from adult pigeons, embryos, breeders and young birds, which were derived from a racing loft that had a clinical history of "young pigeon sickness" and in which PiCV had previously been diagnosed. Using PCR, PiCV DNA was detected in tissues of 13/20 apparently healthy older birds, aged from 1 to 9 years. Viral DNA was most commonly detected in the respiratory organs, including the trachea, pharynx and lung, followed by tissues such as the spleen, kidney and liver. It was also detected in the ovary and/or testes of some birds. This finding, and the detection of viral DNA in tissues from 8/22 embryos, suggested that PiCV may be vertically transmitted. Testing of pharyngeal and cloacal swabs, and blood samples, collected immediately before the death of the adult pigeons, failed to detect all birds found to be infected at necropsy, suggesting that testing of potential breeding birds would not enable exclusion of infected birds from breeding programmes. Additional PCR testing of cloacal swab samples obtained sequentially from 19 young pigeons showed that while four were excreting virus when 15 days old, only one bird was excreting at the time of weaning (28 days old). The detection of viral DNA in cloacal swab samples from 15,8 % of the birds when 37 days old and 100 % of birds when 51 days old suggested that most young pigeons probably became infected in the rearing loft.

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