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Pigeons as a source of chlamydial infections for humans

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Urban and periurban areas are frequently home to wild birds, particularly feral pigeons (*Columba livia domestica*), which can be present at high density. These animals are known as reservoirs of zoonotic viruses, bacteria, fungi and protozoa. In particular, columbiform birds, including pigeons, have been ranked as the second major reservoir, after psittaciformes, of *Chlamydia psittaci*. This is a highly infectious bacterium which inducing asymptomatic forms or pneumonia, poor growth, diarrhea and central nervous system disorders. *C. psittaci* is transmissible to humans causing severe zoonotic infections. Because both, domestic and feral pigeons may be carriers of hazardous agents for humans and animals and get in close contact with humans, the aim of this study was to investigate the pigeons in Slovakia living in different areas close to the people for the presence of *C. psittaci* from pharyngeal and cloacal swabs and compare incidence between domestic and feral pigeons. Each sample was examined by molecular method PCR and in case of positive result the identity of the obtained sequences was examined by a BLAST search. Of the total of 60 clinically healthy feral pigeons that were examined, 13 (21.7% positivity) were positive for *C. psittaci* after sequenation. From 47 domestic pigeons were no pigeons positive for chlamydial infections. Our results show, that feral pigeons have higher risk for chlamydial infections in comparison with domestic pigeons (21.2 times higher). Because urban pigeon populations still represent risk to public health, is necessary performs screening examination of animals and analyze the epidemiological factors affecting the way of transmission and circulation of pathogen with the aim of reducing or halting of the spread of this infection not only between animals but also in the line pigeons – sensitive persons.

Biography

Lenka Cechova has completed Public Health degree at the University of Pavol Jozef Safarik in Kosice, Slovak republic in 2013 and PhD in Public Health in 2017. Her research takes place at the crossroads of public health, epidemiology and infectious diseases with special focus on DNA analysis and genotyping spectrum of chlamydial pathogens in humans and animals. She is a member of several research projects. She has published more than 30 scientific papers and abstracts.

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