

## **Dirofilariosis in Slovakia - *Dirofilaria repens* vs. *Dirofilaria immitis***

**Martina Miterpáková, Daniela Antolová, Zuzana Hurníková**

Institute of Parasitology, Slovak Academy of Sciences, Hlinkova 3, 040 01 Košice, Slovakia

Corresponding author: Martina Miterpáková: e-mail: miterpak@saske.sk

The study is focused on mosquito-borne canine filarial parasites, namely *Dirofilaria immitis* and *Dirofilaria repens*, in veterinary medicine and public health.

In Slovakia, the first autochthonous cases of dirofilariosis were recorded in 2005 in 13 dogs from Bratislava and Komárno districts situated in south-western part of the country. In 2007, the first monitoring covered two areas of south-western and south-eastern Slovakia was carried out. Within this research the utilisation of dogs was revealed as an important risk factor for the infection. Police dogs, guard and hunting dogs, with prevalence rates of 51.1%, 30.0%, 16.0%, respectively, were definitely more often found to be infected when compared with companion dogs (7.0%). On the basis of this study, in the territory of Slovakia highly endemic areas of *D. repens* were identified.

Since then, more than 5,000 dogs have been examined and the research discovered that canine dirofilariosis had expanded to the whole Slovak territory with mean prevalence rates ranging between 2.0% and over 25.0% depending of the

region.

The important to tell is, that after the year 2015 an evident increasing trend of *D. immitis* cases in several Slovak regions has been observed, previously considered endemic only for *D. repens* species. Additionally, in 2019 and 2020 the first registered fatal cases of canine heartworm disease in dogs were recorded.

The research on dirofilariosis, with regard to its zoonotic potential, was in addition to definitive hosts directed also at the detection of human cases of the infection. The first autochthonous and unambiguously confirmed case of human dirofilariosis was reported in 2007, two years after the first finding of dirofilarial parasites in dog population. Since then, between 2007 and the first half of 2021, 25 cases of human dirofilariosis were confirmed in Slovakia, including in Europe very rare case of *D. immitis* pulmonary infection.

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