

O0678 **Human dirofilariasis in Southern Russia: epidemiological peculiarities**

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Background: The result of socioeconomic transformations in Russia in the 1990s was the decrease of volumes of veterinary supervision and measures for prevention a number of parasitic diseases in domestic animals. Consequently this circumstance led to increase of population of neglected dogs and mosquitoes. As a result, the incidence of *D. repens* infection in Russia increased. Due to the favorable natural and climatic conditions, as well as the high affection of definitive and intermediate hosts, the territory of the South of Russia is risk area for sustainable transmission of infestation, therefore more than 25% of cases of human dirofilariasis in the Russian Federation occur in this region.

Aim: to estimate the epidemiological features of human dirofilariasis in the South of Russia, depending on the dynamics of *Dirofilaria* infection in domestic dogs.

Materials/methods: During 2000 - 2016 in the territory of the Rostov region and the Krasnodar Territory, 2143 blood samples of domestic dogs were examined and epidemiological data of 270 patients with dirofilariasis were carried out.

Results: In the period 2000-2008, the contamination of service dogs with dirofilariasis was 29.0%, hunting dogs - 16.0%, fighter dogs - 21.3%, room-decorative dogs - 14.6%, unbreeded dogs - 18.6%. In recent years the diagnosis and treatment of canine dirofilariasis was improved and it led to a significant decrease infection of thoroughbred dogs. Infection with dirofilariasis of service dogs decreased to 17.2%, hunting - to 11.0%, fighting - 11.8%, room-decorative - to 1.3%. However, the incidence rate of outbreeding domestic dogs increased to 22.7%. In the cities of Southern Russia, the proportion of outbred domestic dogs is less than 1.2%, while in rural areas in private households its proportion is 52.1%.

In the period from 2000 to 2008, the percentage of rural residents with *D. repens* infestation was 8.9% (95% CI: 7.2-10.6%), and from 2009 to 2016, this indicator increased more than 3-fold up to 31.2% (95% CI: 28.4-34.0%), $p = 0.04$.

Conclusions: This study shows the leading role of domestic dogs as the main source of dirofilariasis for humans.