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HUMAN *DIROFILARIA REPENS* INFECTION IN UKRAINE (1997–2013)

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Introduction

The filarioid nematode *Dirofilaria repens* is an etiological agent of dirofilariasis, a vector-borne zoonosis. The number of infections in Europe has been increasing recently and *D. repens* has become one of the most rapidly expanding parasites of human and animals.

Objectives

In Ukraine, dirofilariasis has been known for a long time. The first case of human *D. repens* infection was reported in 1927, 16 cases were described in the literature through 1974. From 1975 the cases of human dirofilariasis are a subject of epidemiological registration in Ukraine and are recorded in the state register that covers all country (Salamatin et al. 2013; Acta Parasitologica 58(4): 592–598).

Methods

The epidemiological data covering the period of 1997–2013 have been analyzed. Data have been collected from the reports of all 27 regional sanitary-epidemiological stations owned by the Ministry of Health of Ukraine. A detailed analysis of clinical data gathered during the last 5 years (2009–2013) was conducted.

Results

Within the period of 17 years, 1997–2013, 1717 confirmed human cases of *D. repens* dirofilariasis have been registered. Infections were noted in all of the oblasts of Ukraine, plus Crimea, Kyiv, and Sevastopol. The majority of the cases were noted in Kyiv (176), then the oblasts of Donetsk (158), Zaporizhzhya (149), Dnipropetrovsk (147), Kherson (121), Mykolayiv (113) and Chernihiv (111). Analyzing clinical data of 1007 cases (years 2009–2013), it was found that in 662 cases (66%) the parasitic lesions were located in the head, including 414 (41%) cases of lesions around the eyes. Dirofilariasis of the limbs and torso constituted a lower percentage of cases – 15% and 11% respectively. *D. repens* were also detected in the sexual organs of men (4%), and in female mammary glands (3%). In 17 cases (2%) the location of the parasite was not specified in the data. The age of patients was from 11 months up to 90 years.

Conclusions

The results of our analysis point to a steady increase in *D. repens* infections of humans in Ukraine, underscoring the growing status of this as a significant emerging infectious disease. The Ukrainian sanitary-epidemiological services managed to achieve some measure of success, one of which is creating a system of registering *D. repens* infections in Ukraine. The mandatory registration of human *D. repens* infections in other European countries would allow to evaluate epidemiological situation in the continent.