BEST: International Journal of Humanities, Arts, Medicine and Sciences (BEST: IJHAMS)
ISSN (P): 2348–0521, ISSN (E): 2454–4728
Vol. 9, Issue 1, Jun 2021, 9-28

DIAGNOSTIC DIFFICULTIES OF TRANSMISIVE WORMS ZOONOSES DIROFILARIJASIS AND THELASIASIS IN HUMAN AND VETERINARY PATHOLOGY

BOGDANKA ANDRIC[1+], DAVOR KORUNIC[2], MILICA DJUROVIC[3] & MILENA DJUROVIC[4]

[1,3,4]Medical Faculty University of Montenegro, Podgorica, Montenegro

[2]Private Veterinarian Ambulance Grandov, Bijelo Polje, Montenegro

ABSTRACT

Dirofilariasis(1) and Thelasiasis(2) diseases are transmissible parasitic zoonoses, previously considered to be accidental and rare human diseases. In the last 10 years, the increased number of recorded cases in human and veterinary pathology worldwide has been correlated with the geographical expansion and increased prevalence of these diseases in the hosts to which they have been adapted. The dramatic global changes in ecosystems (3 - 7), which have been largely influenced by human activity, have been the basis of epidemiological changes in this group of infectious diseases. The high adaptability of the parasites and the increasing spectrum of natural hosts and vectors, contributed to their transition from enzootic to zoonotic transmission cycles, without the need for longer-term evolution in enzootic cycles.

Clinical diagnostics are not easy to conduct due to the registered multietiological co-transmission of infectious agents across to the same vector and co-infectious or symbiotic forms of the disease, with consequently more severe forms. In 60% of those infected, the disease progresses asymptomatically. In manifested forms of disease, the similarities of the clinical presentation with other diseases and numerous complications complicate the clinical diagnosis. In co-infection forms, species identification is difficult because of the similarity of clinical presentation (D. imitis and D.repens, and Thelasiasis) (8,9). These problems are compounded by the problem of immunological evaluation, which is important for the etiologic diagnosis and therapy, especially in cases of frequent findings of co-infectious and symbiotic forms of the disease. (10)

In relation to therapeutic treatment, the problems are related to the frequent need for operative resolution of the most frequent manifestations (subcutaneous and ocular dirofilariasis / thelasias), worm extirpation and morphological identification. Serological identification of specific antibodies is very complex and uncertain due to the exceptional abundance of the causative antigens and the host immune response, respectively.(11). The method of choice is PCR, which detects the presence of the smallest amounts of parasites` DNA. (12)

All of our patients were treated with oral administration of ivemectin (150 mg / kg) + dovicine 2 x 100 mg + melarsomine / pro die. The results of the treatment proved to be satisfactory. However, worldwide there is a need is for new and more effective antibiotics.(13,14)

The Mediterranean area is endemic to numerous parasitic diseases. The first cases of diagnosed Dirofilariasis in Europe originate from the Mediterranean area (15,16). From 2015, the number of infected animals and humans with D.repens in Montenegro is constantly increasing. Between 2014 and 2017, at the Clinic for Infectious Diseases in Podgorica, tests for dirofilariasis (D. imitis and D. repens) began to conduct, and during 2017, Thelasiasa was diagnosed for the first time. In our investigations during this period, a total of 18 + 1 cases of dirofilariasis disease were registered: 5

cases of pulmonary disease, 6 cases of subcutaneous disease, 7 cases of ocular dirofilariasis, and 1 case of ocular thelasias. During the same period, there were conducted targeted trials in the private veterinary clinic "Grandov" in Bijelo Polje, Montenegro. Subcutaneous dirofilaria was diagnosed in 11 dogs, 1 case of ocular thelaziasis in cattle, and 2 cases in dogs, using operative methods, worm identification, serological IFA test and PCR method.

KEYWORDS: Dirofilariasis, Thelasiasis & diagnostic difficulties