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SURVEY ON CANINE EHRLICHIOSIS IN DOGS FROM CONSTANŢA COUNTY, ROMANIA

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Abstract Canine ehrlichiosis is a tick-borne disease of dogs caused by the pathogens from the genera *Ehrlichia (Ehrlichia canis, E. chaffeensis, E. ewingii). Ehrlichia canis* and *Ehrlichia ewingii* are common pathogens of domestic dogs that has a worldwide distribution. Canine monocytic and granulocytic ehrlichiosis are two important and potentially fatal diseases of dogs, and also have a public health significance.

The aim of our study is to complete the picture of *Ehrlichia canis* and *Ehrlichia ewingii* infections in dogs from Romania. Serum samples from 256 dogs living in 35 localities from Constanţa county, located in South - Eastern part of Romania, were assayed through SNAP® 4Dx® Plus Test, IDEXX Laboratories. Overall, the results showed a percentage of 6.25% - 16 dogs from 256 were positive to *Ehrlichia canis* and *Ehrlichia ewingii*. The prevalence of *Ehrlichia canis* and *Ehrlichia ewingi*i is very dependent on the distribution of their vectors. No associations ($p > 0.05$) were found between the prevalence and age, gender, breed, origin, and lifestyle of the dogs.

Key words: *Ehrlichia canis, Ehrlichia ewingii*, dogs, diagnosis, Snap 4Dx Plus

Introduction

Canine tick-borne diseases have a strong health significance for both animals and humans due to the sever clinical signs who lead to death and also because some of them are zoonoses. In the last few years their importance has increased, in the scientific world, due to climate and environment changes.

Canine monocytic ehrlichiosis (CME) is a tick-borne disease and is caused by a bacteria who is named *Ehrlichia canis*.

Ehrlichia canis, one of the agents who cause canine ehrlichiosis is a Gram – negative bacteria from the genera *Ehrlichia*. He is located obligatory intracellular in the white blood cells where forms microcolonies.

Ehrlichia canis has tropism for monocyes and macrophages.

In Europe, the main vector of the pathogens who cause canine ehrlichiosis is *Ixodes ricinus*, but the principal vector for *Ehrlichia canis* is *Rhipicephalus sanguineus*, who is worldwide (3).

In Romania a study done on tick species shows that *Rhipicephalus sanguineus* has 0.2% from the total number of ticks collected in the Delta of Danube, near Constanţa county (1).

The disease has three phases: acute, subclinical and chronic. Rudoler and col., in 2015, published an article regarding the evaluation of acute phase proteins (APP) and oxidative marker responses in dogs vaccinated against CME with an