

UNIVERZITET U SARAJEVU - VETERINARSKI FAKULTET



Leptospiroza u urbanim područjima

Završni rad

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Diploma Thesis

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SAŽETAK

Leptospiroza je zoonotsko oboljenje, globalno rasprostranjeno, uzrokovano bakterijom roda *Leptospira*. Bolest ima poseban značaj u urbanim sredinama gdje je prisutan veliki broj glodara, koji su nosioci uzročnika, a bakterije izlučuju urinom u vanjsku sredinu. Glodari koji imaju veoma važnu ulogu u epidemiologiji leptospiroze u urbanim sredinama su crni štakor (*Ratus rattus*) i smeđi štakor (*Ratus norvegicus*). Također, nastanku ove bolesti u urbanim sredinama pogoduju i loši higijenski uslovi što glodarima pruža idealne uslove za opstanak. Pored toga, vremenske prilike poput količine padavina, temperature i vlažnosti imaju utjecaj na preživljavanje ovih bakterija. Patogeni sojevi *Leptospira* opstaju u neutralnim do blago alkalnim zemljištima. Leptospiroza se može prenositi direktnim i indirektnim putem, a najčešće kontaktom sa kontaminiranim okolišem. Bakterija ima specifičnu građu koja olakšava njenu penetraciju u organizam domaćina, a nakon prodora nastaje bakterijemija, nakon čega hematogenim putem odlazi u različite organe, posebno bubrege i jetru. Pored toga, drugi organi i organski sistemi koji mogu biti zahvaćeni su pluća, nervni sistem, kao i oči. Klinička slika zavisi od toga koji su organi zahvaćeni, a bolesne životinje najčešće ispoljavaju simptome koji su povezani sa poremećajima bubrega, ali i jetre. Dijagnoza se postavlja na osnovu kliničkog pregleda, epidemioloških podataka, a od velikog značaja za konačnu potvrdu prisustva uzročnika su serološke metode. Bolesne životinje liječe se primjenom odgovarajućih antibiotika uz primjenu potporne terapije kod zahvaćenih organskih sistema, a terapija će biti uspješnija ukoliko se što ranije krene sa procesom liječenja. Preventivne mjere su veoma važne za suzbijanje leptospiroze, zbog toga je neophodno redovno provoditi deratizaciju, odražavati higijensko-sanitarne uslove i vakcinisati životinje. Za vakcinaciju pasa u našoj zemlji koriste se inaktivirane vakcine koje mogu biti polivalentne i kombinovane polivalentne vakcine. U skladu sa navedenim, predstavljena je i epidemija leptospiroze na prostorima Kantona Sarajevo kako bi ukazali na značaj ove zoonoze i posljedice koje donosi za ljude i životinje.

Ključne riječi: leptospiroza, zoonoza, *Leptospira spp*, glodari, epidemija, deratizacija

ABSTRACT

Leptospirosis is a zoonotic disease, globally distributed, caused by bacteria of the genus *Leptospira*. The disease is of particular importance in urban environments where there are high rodent populations, which are carriers of the pathogen, and the bacteria are shed in the urine into the external environment. Rodents that play a very important role in the epidemiology of leptospirosis in urban areas are the black rat (*Ratus rattus*) and the brown rat (*Ratus norvegicus*). The occurrence of this disease in urban areas is also favored by poor hygiene conditions, which provide rodents with suitable conditions for survival. In addition, weather conditions such as rainfall, temperature and humidity have an impact on the survival of these bacteria. Pathogenic strains of *Leptospira* survive in neutral to slightly alkaline soils. Leptospirosis can be transmitted directly and indirectly, most often through contact with a contaminated environment. The bacterium has a specific structure that facilitates its penetration into the host organism, and after penetration, bacteremia occurs, followed by hematogenous dissemination to various organs, especially the kidneys and liver. In addition, other organs and organ systems that can be affected are the lungs, the nervous system, as well as the eyes. The clinical picture depends on the organs affected, and diseased animals most often show symptoms associated with renal and hepatic disorders. Diagnosis is based on clinical examination and epidemiological data, while serological methods are of great importance for confirming infection. Diseased animals are treated with appropriate antibiotics and supportive therapy to maintain the function of affected organ systems and the therapy will be more successful if the treatment process is started as early as possible. Preventive measures are very important for the control of leptospirosis; therefore, it is necessary to regularly carry out deratization, maintain hygienic and sanitary conditions, and vaccinate animals. Inactivated vaccines are used for dog vaccination in our country, which can be single-disease or combined vaccines. In accordance with the above, the epidemiological situation of leptospirosis in Sarajevo Canton was presented in order to highlight the importance of this zoonosis and the consequences it poses for humans and animals.

Keywords: leptospirosis, zoonosis, *Leptospira spp.*, rodents, epidemic, deratization