

SHORT COMMUNICATION

Epidemiology of human leptospiroses in Slovakia

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Leptospiroses are world-wide occurring zoonoses of men and animals caused by more than 200 different serovars of leptospires. Their natural reservoirs are feral and domestic animals which excrete the pathogenic agents by urine. The man is infected mostly by contact with urine via damaged skin, intact mouth, nose mucous and conjunctivae or by contaminated foods and drinking water.

In Slovakia, the leptospiroses and their agents have been studied for more than 50 years. Altogether 16 serotypes of leptospires circulate in our country in three types of foci: natural, anthropourgic and synanthropic.

The epidemiologic features of leptospiroses show some changes over time:

a) The incidence rate dropped more than twice to the actual average annual values of 0.7 per 100 000 population.

b) The majority of diseases has been field fever cases e.g. *leptospirosis grippotyphosa* (1/3 of cases) and Weil's disease – *leptospirosis icterohaemorrhagiae/copenhageni* (1/4) followed by swineherd diseases – *leptospirosis pomona* (approximately 18.0 %) and cases caused by leptospires of different serovars belonging to the serogroup Sejroe (approx. 15.0 %). While the absolute and relative number of Weil's and swineherd diseases rose, the number of Sejroe-infections dropped over time. Fairly numerous are also infections due to leptospires belonging to the serogroup Australis (approx. 6.0 %).

c) The age-specific incidence rate curve has two peaks: in older children's and young adults' groups (10–19 years) and in 40–69 years old adults. The sex ratio has been 2.9.

d) As to the professional distribution of leptospiroses, in abattoir workers and butchers the swineherd disease has prevailed (its main animal host being pigs), the majority of cases in housewives and pensioners have been due to Sejroe infections (the main reservoir are house mice), the pupils and students have been mostly affected by field fever and Weil's disease respectively (the reservoirs are common voles and rats respectively) etc.

e) Concerning the seasonal distribution of leptospiroses, more than 50 % of them have occurred from July to September; this was conditioned especially by field fever and Weil's disease cases.

The decrease of incidence rates of leptospiroses and the shift of the diseases to the younger groups were influenced by the mechanization of agricultural activities, use of solid footwear, improved storage and handling foodstuff, safe drinking water supply, vaccination of cattle, pigs, dogs, drainage of swamps, regulation of water courses etc. Contrarily, insufficient rodent control in slaughter-houses and agricultural objects, increasing leisure activities in the open air (often without proper drinking water supply and foodstuff storage preventing access of rodents to them), swimming in rivers and lakes situated in natural foci of leptospiroses are the factors enabling acquirement of a certain part of leptospiral infections. Therefore the preventive measures should be aimed at lowering also these risk factors.

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This work was presented on the Society of the Slovak Physicians in Slovak Medical Society in Bratislava on the January 30, 2006.