

RABIES ORAL VACCINATION IN LATVIA – PAST, PRESENT AND FUTURE

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INTRODUCTION: Rabies is an enzootic disease in Latvia for more than 40 years. The main reservoirs of rabies virus are red fox (*Vulpes vulpes*) and raccoon dogs (*Nyctereutes procinoides*). There were 5881 rabies cases in a various animal species and three human cases registered from 1991 to 2009.

MATERIALS AND METHODS: Rabies eradication using oral vaccination of wild animals has been started in 1991 by State Veterinary Service (Food and Veterinary Service since 2001). More than 12.6 million vaccine baits were distributed in a territory of Latvia from 1991 to 2009. In order to evaluate efficiency of rabies oral vaccination (ROV) since 1991 three separate periods were established:

Period 1 – oral vaccine (without biomarker tetracycline) were distributed manually by hunters in small quantity irregularly in some regions (1991-1997). During this period 27 943 vaccine baits were distributed (0.22% from total amount of 12.6 million);

Period 2 – oral vaccine (containing biomarker tetracycline) were distributed manually by hunters in a limited amount and territory (1998-2004). During this period 1 106 100 vaccine baits were distributed (8.73% from total amount of 12.6 million);

Period 3 - aerial distribution of oral vaccine (containing biomarker tetracycline) covering all territory of Latvia (2005-2009). During this period 11 538 500 vaccine baits were distributed (91.05% from total amount of 12.6 million).

Analysis of changes in rabies incidence in different periods was carried out.

RESULTS: Results of the analysis showed that ROV implemented incompletely with limited resources were ineffective during Periods 1-2, moreover rabies incidence reached peak in 2003 (963 cases). After the change of ROV strategy in 2005 (Period 3) rabies incidence were decreased to 69 cases in 2009.

CONCLUSIONS: There is need to continue ROV of rabies virus reservoirs in order to eradicate rabies in Latvia and move forward to officially rabies free country status. Detailed analysis of Period 3 is necessary for further possible improvements of rabies eradication programme in a future. Close collaboration with neighbouring countries is essential to ensure successful rabies eradication in Baltic countries. One of the further steps to protect Latvia from introduction of new rabies cases from Russia and Belarus is development of buffer zone where ROV is carried out on a regular basis.