Report of the Commission on “Rabies prevention and research programmes”*

Summary: The Commission indicated that wildlife control activities have declined in recent years, largely for financial and administrative reasons. Border zones in several regions were singled out as requiring special measures. Topics for continued research were also specified, including evaluation of recombinant and inactivated vaccines, epidemiology, surveillance and control of canine and wildlife rabies in Europe, and investigation of fox and raccoon-dog rabies viruses.

KEYWORDS: Disease control - Domestic animals - Europe - Rabies - Research - Viral diseases - Wildlife.

RABIES PREVENTION

Rabies control in wildlife is currently in a phase of rapid decrease in the number of km\(^2\) infected and in human exposure. Failures in this process are due to two major causes: insufficient baiting campaigns (problems of organisation, repetition by space and time interval) and a discontinuation of the systematic extension of rabies control into all infected territories. The latter drawback is mainly due to a lack of financial means and of harmonisation of actions along national and sub-national administrative borders. Regulatory solutions should be found to overcome this situation. Suggestions are made by the Commission.

Epidemiological conditions call for particular efforts in the following geographical areas:

a) along the French/Swiss border towards the west and north-west;

b) from the present control project of Luxemburg, Belgium, France and the Federal Republic of Germany towards all directions including the Netherlands;

c) towards the remaining foci in Austria from the west, north and south;

d) from the control areas, from the Federal Republic of Germany towards the east into the territories of the German Democratic Republic and Czechoslovakia, as well as westwards into France.

The Commission notes that special planning committees have been created for activities a-c and that the WHO organised a consultation on 2 September 1988 in Brno for the planning of rabies eradication from Central Europe towards the east.

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and south-east. A special group may also be set up to include South Tyrol, Austria, Italy and Yugoslavia.

Aerial distribution of baits offers new possibilities for large-scale vaccination under difficult conditions, although, whenever possible, the active cooperation of hunters and forestry services should be maintained as essential elements of the eradication schemes.

RESEARCH PROGRAMMES

Further research should concentrate on three major areas:

1. Comparative studies on the efficacy and safety of recombinant virus rabies vaccines and attenuated virus rabies vaccines under field conditions. New epidemiological threats and conditions call for continuous efforts in vaccine development for wildlife. For this purpose, and subject to the approval of such trials by national authorities, research coordination should be ensured by including at least two WHO Collaborating Centres (i.e. Nancy and Tübingen) and specialised virologists in the planning and execution of bait distribution and intensive post-baiting surveillance.

2. Research on the epidemiology, surveillance and control of canine and wildlife rabies in Europe:
   a) surveillance of arctic rabies (see recommendations of working group);
   b) surveillance of raccoon-dog rabies spread in Eastern Europe and ecological studies of:
      - population dynamics and turnover;
      - movements;
      - contact rates between individuals (intra- and inter-species).

Basic research should also be conducted on the type of virus involved and its inter-species transmission.

c) ecological studies of non- or semi-restricted dogs in Mediterranean countries in order to improve control methods (operational aspects of canine rabies control in Turkey and North African countries) and baiting procedure concerning oral vaccination.

d) surveillance of bat rabies, namely of bat population dynamics and crossborder movements. Association of the serotine bat with migratory species sharing summer or winter roosts.

3. Research on the fox rabies viruses and raccoon-dog virus:
   a) increase the collection of strains to be compared (especially old strains isolated at the onset of the epizootic);
   b) compare the virulence of a larger number of strains in foxes and other species as well as excretion patterns;
   c) try to confirm, using a large number of strains, the change in virulence of the red fox virus already described;
d) use the monoclonal antibodies approach to compare the different strains of fox or raccoon-dog rabies virus;

e) compare the nucleic acid sequences of rabies virus strains;

f) extend the panel of monoclonal antibodies, especially those directed against rabies virus glycoprotein and nucleoprotein, against polar fox rabies virus and raccoon-dog virus isolates;

g) compare antigenic properties of red fox and polar fox rabies viruses with raccoon-dog rabies virus;

h) study the protection conferred by available vaccines against new rabies virus strains.

It is hoped that the EEC and OIE, in addition to the WHO, will take an active part in all these activities and that a centre for orthopox viruses will be created.

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RAPPORT DE LA COMMISSION «PRÉVENTION DE LA RAGE ET PROGRAMMES DE RECHERCHE».

Résumé : La Commission a indiqué que le contrôle de la faune sauvage s'est relaxé au cours des dernières années, en grande partie pour des raisons financières et administratives. Elle a désigné dans plusieurs régions des zones frontalières devant faire l'objet de mesures spéciales. Elle a également indiqué les principaux domaines dans lesquels la recherche doit être poursuivie : évaluation des vaccins recombinants et inactivés, épidémio logie, surveillance et prophylaxie de la rage canine et de la rage sylvestre en Europe, étude des virus de la rage vulpine et de celle du chien viverrin.


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INFORME DE LA COMISIÓN DE «PREVENCIÓN DE LA RABIA Y PROGRAMAS DE INVESTIGACIÓN».

Resumen: La Comisión indica que el control de las actividades de la fauna salvaje ha declinado en los últimos años, en gran medida por razones financieras y administrativas. Se destacan zonas de frontera en muchas regiones que requieren medidas especiales. Se proponen temas para una investigación ininterrumpida, entre los cuales, evaluación de vacunas recombinadas e inactivadas, epidemiología, vigilancia y control de rabia en caninos y fauna salvaje en Europa y estudio de virus rúnicos de zorros y perros mapaches.