

1990, issue 18 - Abstracts

RISK IN ANIMAL EPIDEMIOLOGY (AEEMA Meeting, Alfort, 1990, 31 May, 1990)

Aetiological epidemiology. Concepts, measures and investigation methods

Goldberg (M), Leclerc (A)

This paper deals with the most important concepts of aetiological epidemiology and with the use of investigation methods at analysing the importance of factors able to influence occurrence of animal health problems. In the first part, definitions are given: population, incidence rate, risk, cohort, prevalence, risk factor. The question of causality in epidemiology is also presented. The second part starts with the presentation of the notion of relative risk, a measure of comparison between groups, which hold an important place in every aetiological survey. Then the calculus strategies are given for the two main types of studies: cohort study and case-control study.

Risks factors in animal epidemiology

Madec (F) & Fourichon (C)

Research related to risk-factors is an essential sector in epidemiology since it opens towards opportunities for prevention. Several methods have been proposed with the scope to obtain the risk-factors. When complex diseases are concerned (syndromes), an alternative way to the conventional tests (RR, odds-ratio ...) is to use multivariate descriptive methods such as the correspondence analysis and the cluster analysis. This option has nevertheless certain rules and constraints that have to be respected as well during data collection as during data processing.

Prevision of foot-and-mouth disease risk in Europe. Description and analysis

Moutou (F)

From recent studies, the components of foot-and-mouth disease risk are presented. Their importance had been really fundamental for the definition of the new sanitary policy to be followed within the EEC after 1992. However, the analysis should and could certainly be improved.

Decision epidemiology

Foulon (G)

Health became part of economics and, as such, is linked to the constraints of general economy. Resources are limited, inputs see their cost increasing and services productivity are asked to be improved. Epidemiology which help to orientate decisions on medical basis is without any power in front of financial investments. The aim of this article is to show how economic analysis came close and closer to health professional preoccupations to help in a better management of resources. The place where these two subjects meet, called for this reason "DECISION EPIDEMIOLOGY", is building its own entity and its own methods. The tools for decision assistance, used for company management, are transformed to suit health field and then evaluated.

Probabilistic prevision of risk. Evaluation of available methods for aid in decision-making

Grenier (B)

Three examples in human medicine illustrate the risks and the cost of preventive measures as to be an aid for medical decision making. The first example illustrates the gain of utility expected from the decision (of doing something) compared with the potential utility of doing nothing or anything else, considered as the base-line decision. The gain may be expressed graphically as a function of a variable (risk probability) use as the decision parameter; the gain is null when the parameter is equal to the

“threshold” value. In the second, example illustrates the Absolute Risk Reduction (Attributable risk reduction) which is the difference in risk rate between the control and treatment groups. The reciprocal of ARR is the number to be treated in order to prevent the risk for one patient. The number needed to be treated tells in concrete terms how much effort must be expended to prevent one event, thus allowing comparisons with the amounts of effort that must be expended to prevent the same event in patients with other methods.

EPIDEMIOLOGICAL SITUATION

Swine fevers in Europe during 1989

Picard (M)

Situation of Hog Cholera and African swine fever and their evolution in Europe, compared to the previous year.

Enzootic bovine leucosis in France during 1989

Dufour (B)

The situation of the program against Enzootic bovine leucosis is presented with the help of tables and figures. The data used here have two different origins: information's coming from Departments Veterinary Services and from a survey carried out by farms sanitary committees (GDS). The indexes used here, like herds and animals infection rate, clinical outbreaks figures, and qualification rate, show the fast progress achieved by controlling Enzootic bovine leucosis. The program for 1990 should improve these results and lead to the eradication of the disease.

Animal brucellosis in France during 1989

Toma (B)

From the technical data collected by the local veterinary officers and put together by the national veterinary administration, the author gives the figures of the sanitary situation for bovine, ovine and caprine brucellosis in France during 1989. The overall figure shows a slight increase of the situation.

Aujeszký's disease in France during 1989

Toma (B), Vannier (P), Lorant (JM), Vigouroux (A), Goyon (M), Plateau (E), Lery (M), Eloit (M), Rose (M), Gonin (P), Mollard (M), Laurent (J) & Maire (C)

This paper presents the epidemiological situation for Aujeszký's disease in France during 1989, using tables and figures. The tracers used lead to the idea that the improving of the situation noticed these last year's went on in 1989.

Rabies in France and in Europe in 1989

Barrat (J) & Blancou (J)

The epidemiological situation of rabies in France and in Europe during 1989 was presented from tables, maps and graphs. Some new scientific and technical information's, in the field of epidemiological or control of rabies, was documented.

The campaign against bovine tuberculosis in France during 1989

Bénet (J-J)

During 1989, 511.000 cattle herds, i.e. 19.2 millions of cattle have been tested against tuberculosis. Annual prevalence on December 31st 0.23% and incidence is 0.23%. The ratio for infected animals is 3 out of 10.000. The number of cattle seized at the slaughter-house is still decreasing. The proportion of non-marked animals being seized, from has been quite stable since these past years: 25%. The

proportion of whole seizure on all the seizures increase during these past 10 years, from 11 to 18%. The study of clusters of departments with different epidemiological situations does not allow to find an easy analysis method leading to the optimisation of sanitary decision. Most of the time, the different indicators do not discriminate between opposite effects of excess or default error. The screening for infected herds through tuberculation or by discovering tuberculosis lesions on an animal at the slaughter-house should lead to a confirmation in every favourable situation Department, *i.e.* most of them. Effort must be now on the quality of the controls when new animals are introduced in a herd.

PAPER OF EPIDEMIOLOGY

Value of the coprological test for carnivore hosts

Martini (M) & Poplayen (G)

The sensitivity (SE), the specificity (SP), the positive (PPV) and negative (NPV) predictive values of the coprological tests, performed on 208 foxes, 105 dogs and 95 cats for tapeworms, ascarids, whipworms and hookworms were evaluated. The SP levels are always very high, whereas the SE shows rather low values, for tapeworms especially. PPV values lie between a minimum of 27% for whipworms in fox and a maximum of 100% for tapeworms in all the three host species. The NPV lowest value is 50% for tapeworms in cat, the highest 100% for hookworms in dog. These parameters were also correlated with the prevalence rates and with the mean intensity and the abundance, measures of the distribution of the parasites in their hosts.