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TOPICS OF VETERINARY PUBLIC HEALTH

Edited by
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INTRODUCTION

The World Health Organization and the Food and Agricultural Organization have defined Veterinary Public Health as a "component of public health activities devoted to the application of veterinary skills, knowledge, and resources to the protection and improvement of human health". Veterinary medicine, in contrast, is "the branch of medicine concerned with the health of animal species other than man". "Good veterinary practices" are finalized to protect consumers, workers of farms and animal-related industries, environment and animals from zoonoses, communicable animal diseases of economic importance, chemicals improperly used in animal disease control, illegal substances used to enhance animal production, drug-resistant pathogens, food of animal origin of impaired quality, environmental pollution by farm wastes and dead animals, occupational diseases, economic losses, risks associated with man/animal/environment coexistence and ethic, social and economic implications of ill-being of animals.

Veterinary medicine has a historical and cultural tradition rooted in the ancient world when the veterinarian played a crucial role in the society. Animals, in fact, have always represented an important "economic" factor for both their working abilities (civil and military) and for food supply. In the "industrialized world", this situation lasted until the early years of the present century when mechanical means gradually replaced animals as draft sources and their chief role became the production of foodstuff (meat, milk, eggs, honey) and of other products of animal origin (hides, wool, etc.); to all this, fishing and fish farming products must be added. At the same time, animals were increasingly used as "pets", whilst man's receptiveness to the safeguard of animals' rights has greatly increased, so that now a proportion of the public opposes hunting and animal experimentation. This present situation has posed new problems which contributed to a quantitative modification of the role of veterinary public health activation. In view of its nature and function, veterinary medicine is prevalently a preventive medicine involved in the control of communicable animal diseases and, first of all, of zoonoses. In performing these activities, the veterinarian is helped by the possibility of intervening even in a drastic way. In this connection, it is appropriate to stress that important geographic areas were completely cleared from certain diseases through the application of "stamping out". This method was initially named "Lancisi's method" as it was first introduced in 1700 by Giovanni Lancisi, a papal archiater, to control rinderpest. An essential contribution to the modification of the criteria followed to prevent the diffusion of diseases was first given by vaccines and, later on, by the massive use of antibacterial drugs for both therapeutic and prophylactic purposes. The introduction of vaccines in veterinary medicine led to the solution of a number of health problems, but it constituted also an ideal test ground for the application of biotechnologies. It is in fact obvious that the large-scale use of vaccines in animals allowed much information to be acquired on the application of them in human medicine.

Starting from the '50's, pharmaceutical industry initiated the production of drugs of prevalently veterinary interest, and some methodologies of intensive farming, which are defined as "hard", specifically require a massive use of antibacterial drugs to control the diffusion of infectious diseases. Practically, drugs in farming activity have become an important economic factor in farming management. Such a situation, on the one side, allowed the increase of animal production whereas, on the other side, created new health problems which are still waiting complete solution. Adverse effect on animals' health are in fact reported, such as stress, presence of drug residues in foodstuffs of animal origin, and environmental pollution by zootechnical effluents.
Special attention should be given to problems connected with pet animals. These undoubtedly contribute to enhance the well-being of human population that is sometimes afflicted by psychological distress and, on some occasions, this can be substantially relieved by the presence of companion animals. The coexistence of animals and man, however, may pose health problems which should be prevented by taking strict hygienic measures which, anyway, must be known by the animals’ owners. It is therefore imperative to establish a correct health education system addressed to veterinarians who, in turn, should transmit it to the public. Besides the steadily increasing number of pets, straying has conspicuously developed. This is a serious problem which already affects a number of geographic areas and which implies relevant risks for both human and animal health and for the environment.

We should also consider the occurrence, or even better, the discovery of "emerging" diseases for which no certain elements are available that would allow to evaluate the risks for animals and man. Such diseases drew the attention of important research teams that are actively operating and, probably, the work being done will help clarify the behaviour of some human pathologies.

This volume has been prepared by an interdisciplinary group including biologists, physicians and veterinarians who recognize the uniqueness of public health in its different expressions, among which veterinary public health. Besides some general items, which are intended to be read in a modern way, emerging problems are discussed such as urban zoonoses control, drug surveillance, modern technologies concerning the hygiene of food of animal origin, the surveillance of occupational diseases of farm workers and allied categories, and emerging pathologies.

The Editors
Agostino Macri and Adriano Mantovani