

The Misuse of Veterinary Drugs and Relevant Hazards

Opinion

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In most developing countries, the laws are such that veterinary medicine is perceived as a domain reserved for animal health and production! Little attention is paid to the crucial role of veterinary services (public and private) in the prevention and control of current and emerging zoonosis, as well as in the management and control of veterinary drugs. Veterinary pharmacology is faced with the consequences of improper and hazardous drug use. Thus, drug residues found in foodstuffs of animal origin represent a potential threat to human health; involving different types of conditions: teratogenicity, carcinogenicity, allergy and numerous tissue toxicities. However, the main and growing concern for public health remains antimicrobial resistance.

In contrast to the proper use of a drug, improper use is one that falls into the category of inappropriate lay practices [1]. The safe and effective use of veterinary medicines is crucial, not only for animal health and welfare but primarily for the safety of the user and the consumer of treated animal products [2]. Lack of information on the safe and appropriate use of veterinary remedies is another major cause of the erroneous and dangerous use of veterinary drugs [2].

Self-Medication practice a Double-Edged Sword

Self-medication is defined as the use of medicines by individuals to treat self-recognized or self-diagnosed conditions or symptoms [3]. The three main conditions that must be met in the control of veterinary drugs are quality, safety, and effectiveness. However, these conditions are often not respected in the case of self-medication. So, self-medication can be perceived differently depending on the person-

al level of education and legal supervision. At a time when, in certain developed countries, various public policies aiming to promote self-medication have been introduced [1], in emergent countries, this practice constitutes a growing threat to animal and public health for professionals and authorities. Often, this practice is not subject to any official veterinary control.

The situation may be hazardous because many livestock keepers are illiterate or have not been trained in the potential risks associated with the use of certain drugs. Thus, drug poisonings in animals commonly occur due to off-label use of medicines, wrong dosage, negligence, accidental ingestion, or contaminated drugs, severe adverse reactions, and dangerous drug interactions.

Drug Resistance an Increasing Threat

Antimicrobial resistance is a global public health threat; it is not a problem limited only to emerging countries but remains a major public health concern in developed countries [4]. The prevalence of antimicrobial-resistant bacteria has attained an incongruous level worldwide and threatens global public health as a silent pandemic, requiring urgent action [5]. Antimicrobial usage in human and veterinary medicine is considered the single-most important factor for the development of antimicrobial resistance [6].

In developed countries, however, the phenomenon has more to do with human self-medication than with the use of veterinary drugs. Thus, these countries have developed programs with specific guidelines for food-producing animals; by contrast, companion animals, food, and the environment have not received the same attention [6]. The rational use of antimicrobials must not be limited to reducing use but also include improved diagnostic tools and effective pharmacovigilance.



One-Health Approach a Holistic Vision

One health concept is an integrated, unifying approach that aims to sustainably balance and optimize the safety of humans, animals, and ecosystems that are linked and interdependent [7]. In view of this, one health means rational management of veterinary drugs to limit the threat to all and safeguard human health sustainably. Thus, veterinary and human medicines must work closely together without any sort of superordination! From this point of view, pharmacovigilance will involve the control of both veterinary and human drugs, and public health will automatically involve the veterinarian's mission as sentinel.

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