

Veterinary Medicine for Managing Infections in Animals

Alessandro David*

Department of Veterinary Medicine, Université Cheikh Anta Diop, Dakar, Senegal

Corresponding author: Alessandro David, Department of Veterinary Medicine, Université Cheikh Anta Diop, Dakar, Senegal, E-mail: david_a@gmail.com

Received date: July 30, 2024, Manuscript No. IPJARN-24-19772; **Editor assigned date:** August 02, 2024, PreQC No. IPJARN-24-19772 (PQ); **Reviewed date:** August 16, 2024, QC No. IPJARN-24-19772; **Revised date:** August 23, 2024, Manuscript No. IPJARN-24-19772 (R); **Published date:** August 30, 2024, DOI: 10.36648/2572-5459.9.4.132

Citation: David A (2024) Veterinary Medicine for Managing Infections in Animals. J Anim Res Nutr Vol.9 No.4: 132.

Description

The use of antimicrobial agents in the treatment of infections in animals, emphasizing both the importance of these drugs and the challenges they present. Antimicrobial therapy has been a fundamental of modern veterinary medicine, enabling veterinarians to treat bacterial infections in animals, ensure their health and prevent the spread of disease. However, the increasing problem of Anti-Microbial Resistance (AMR) poses significant risks to both animal and human health and the veterinary field must adapt its practices to address this global challenge.

Antimicrobial therapy in veterinary medicine

Antimicrobial agents, particularly antibiotics, are indispensable in veterinary medicine for treating bacterial infections in animals. From companion animals like dogs and cats to livestock such as cows, pigs and poultry, antibiotics are used to manage a wide range of conditions, including respiratory infections, skin conditions and post-surgical infections. Without effective antimicrobial therapy, many animals would suffer from prolonged illness, reduced productivity and even death.

In the context of food-producing animals, antimicrobial therapy also plays a key role in ensuring food safety and security. Sick livestock can lead to decreased meat, milk and egg production, which in turn can affect the livelihoods of farmers and the availability of food for human consumption. Additionally, the prevention of zoonotic diseases that can be transmitted from animals to humans-often depends on the judicious use of antimicrobials to control infections in animal populations. For these reasons, antimicrobial therapy is not just about treating individual animals but also about safeguarding broader public health.

However, despite the clear benefits of antimicrobial therapy, its overuse and misuse in veterinary practices have contributed to the growing problem of antimicrobial resistance. This issue must be addressed with urgency and responsibility.

AMR poses a serious threat to both animal and human health. In animals, resistant infections are harder to treat, leading to higher mortality rates, prolonged illness and increased suffering. For humans, the risk lies in the potential transmission of resistant bacteria from animals to humans through direct contact,

consumption of contaminated animal products, or environmental pathways. This issue is particularly concerning in food-producing animals, where antibiotics are sometimes used not only to treat infections but also to promote growth or prevent disease in healthy animals-a practice that has come under increasing scrutiny for its contribution to AMR.

One of the most alarming aspects of AMR is the possibility that it could render some of our most powerful antibiotics ineffective, leading to a future where common infections or minor injuries could once again become life-threatening. This has led to calls for a "One Health" approach to combating AMR, recognizing that the health of humans, animals and the environment is interconnected and that solutions must be cross-disciplinary.

Use of antimicrobials in veterinary practices

In response to the AMR crisis, there has been a growing movement within veterinary medicine to promote the responsible use of antimicrobials, often referred to as antimicrobial stewardship. Antimicrobial stewardship involves using antibiotics only when necessary and in the most effective way possible to minimize the development of resistance. This means ensuring that antimicrobials are prescribed based on proper diagnosis and sensitivity testing, using the correct dose and duration of treatment and avoiding the use of antibiotics for purposes such as growth promotion in livestock.

As the primary prescribers of antibiotics for animals, veterinarians must be at the forefront of implementing stewardship practices. This includes educating pet owners and farmers about the importance of responsible antimicrobial use, as well as monitoring and reporting antibiotic usage patterns to help identify areas where overuse may be occurring.

At the same time, it is essential for veterinarians to stay up to date with the latest research on antimicrobial resistance and alternative treatment options. For example, vaccines can play a vital role in preventing bacterial infections in animals, reducing the need for antibiotics in the first place. In addition, advances in probiotics, immune modulators and other non-antibiotic therapies offer potential alternatives for managing infections in animals. By embracing these innovations, veterinarians can reduce the reliance on antibiotics while still providing high-quality care for animals.

In addition to the efforts of individual veterinarians, there is a need for stronger regulatory oversight and policy changes to curb the overuse of antimicrobials in veterinary practices. Many countries have already taken steps in this direction, such as banning the use of antibiotics for growth promotion in livestock or restricting the use of certain classes of antibiotics that are considered critically important for human medicine.

At the international level, organizations like the World Health Organization (WHO) and the World Organization for Animal Health have called for a coordinated global effort to combat AMR. This includes developing standardized guidelines for the responsible use of antimicrobials in animals, increasing funding for research into alternative therapies and improving surveillance systems to track the spread of resistant bacteria.