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To: All Veterinarians, Pharmacists

Prudent use of Antimicrobials

General Guidelines for Prudent use of Antimicrobials

Prudent use of antibiotics implies not only the reduction of the overall use of antibiotics but also the use of the appropriate antibiotic according to the specific clinical case, according to the sensitivity of the bacteria and according to best practices. The following are some general guidelines that the prescriber may follow for a more prudent use of antimicrobials.

- Antimicrobial prophylaxis should be prescribed only when a veterinary practitioner considers it necessary due to the gravity of a single case or the situation in an entire animal unit.
- Alternative methods which have been proven equally efficient should be given precedence over antimicrobial treatment. Guidelines for treating the most significant diseases should be issued to standardise the treatment practice.
- The course of antimicrobial treatment should not exceed the length required by the nature of the disease.
- The primary choice should be a narrow spectrum antimicrobial. The use of broad-spectrum antimicrobials and antimicrobial combination should be avoided. Pathogens susceptible to penicillin ought not to be treated with other beta-lactams or broad-spectrum antimicrobials.
- In viral infections, antimicrobials ought not to be used as prophylaxis against secondary bacterial infections.

- If an animal unit suffers from recurrent infections that require antimicrobial treatment, efforts should be made to eradicate the diseases by altering the production conditions and methods.
- Antimicrobial substances prone to fast-developing resistance or proven to have detrimental effects on the environment must be avoided.

Differences between Preventive use, Metaphylaxis and Prophylaxis

‘Preventive’ use of antibiotics is not permitted. Metaphylaxis and prophylaxis are allowed. However preventive use should not be used on the pretext of prophylactic or metaphylactic use. The prescriber must weigh carefully the benefits of prescribing an antimicrobial agent for metaphylactic or prophylactic use, and should document the evidence that necessitates their use in the appropriate records on the farm.

Preventive use

In this context prevention means the administration of antimicrobial agents in order to compensate for bad hygiene, bad feeding practices, or when no clinical signs in the animal/herd are present.

Metaphylaxis

Frequently, animals are kept in groups and whilst this is beneficial from practical husbandry and animal welfare aspects, it means that the group may be at risk when a disease strikes. As a result, it is sometimes necessary to treat the group. This would be the case where it is known that an infectious disease is present and where experience shows that the disease will infect most, or even all of the animals in the group once one animal shows symptoms of infection. Such use is sometimes termed ‘metaphylaxis’.

Prophylaxis

Bacterial infections in large flocks or herds often appear at identifiable and predictable stages during the life time of the animal, e.g. respiratory problems after regrouping, colibacillosis during the post-weaning period, shipping fever following transport, etc. Treating in situations like this is referred to as prophylactic treatment. The farmer and the veterinarian are familiar with imminent disease hazards on their farms, and early action, carefully and selectively carried out, is a necessary part of disease management. As may be appreciated, preventative action is similar to that practiced in human medicine in cases such as bacterial meningitis outbreaks in schools or colleges where the group of students potentially exposed will be treated in a preventative manner.

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