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Pharmacokinetics of intravenous and subcutaneous ceftiofur in alpacas

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Pharmacokinetics of intravenous and subcutaneous ceftiofur in alpacas

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The purpose of this study was to determine the pharmacokinetics of ceftiofur after intravenous and subcutaneous dose of 8 mg/kg to alpacas. Bacterial infections requiring long-term antibiotic therapy such as neonatal bacteraemia, pneumonia, peritonitis, dental, and uterine infections are a significant cause of morbidity and mortality in this species. However, few antimicrobials have been evaluated and proven to have favorable pharmacokinetics for therapeutic use. Most antimicrobials that are currently used require daily injections for many days. Ceftiofur is a long-acting cephalosporin that is formulated for subcutaneous administration, and its long-elimination half-life allows for 14-day dosing intervals in dogs and cats. The properties of ceftiofur may be advantageous for medical treatment of camelids due to its broad spectrum, route of administration, and long duration of activity. Pharmacokinetic evaluation of antimicrobial drugs in camelids is essential for the proper treatment and prevention of bacterial disease, and to minimize development of antibiotic resistant bacterial strains due to inadequate antibiotic concentra-