

Comparative efficacy of dexamethasone, ketoprofen and gamithromycin in a lipopolysaccharide-inflammation model in calves

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The anti-inflammatory actions of dexamethasone (DEX), ketoprofen (KTP) and gamithromycin (GAM), a macrolide antibiotic with possible immunomodulatory properties, were compared in an in vivo lipopolysaccharide (LPS) inflammation model with forty-six 4-week-old calves. The calves received a single dose of LPS intravenously, either alone or in combination with a drug and were clinically scored for 72h. Plasma samples were repeatedly collected and analysed for cytokines (TNF- α and IL-6), serum amyloid A (SAA) and prostaglandin E2. GAM did not influence the clinical condition compared to controls, nor the cytokine or SAA profiles. Although fever persisted after DEX, either alone or in combination with GAM, this treatment resulted in a faster recovery and an inhibition of cytokine and SAA concentrations. KTP, on the other hand, reversed the effect of LPS on the clinical score, as well as on cytokine and SAA levels. However, these levels were not influenced when KTP and GAM were combined.