Pharmacokinetics and Safety of Oral Doses of Meloxicam in Foals Less Than Six Weeks of Age

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Meloxicam is well tolerated by healthy foals at a dose rate of 0.6 mg/kg, PO, q 12 h. Authors’ addresses: School of Animal and Veterinary Sciences, Charles Sturt University, Wagga Wagga 2650, New South Wales, Australia (Raidal, Noble); and Troy Laboratories Pty. Ltd., Smithfield 2164, New South Wales, Australia; e-mail: sraidal@csu.edu.au (Raidal). © 2009 AAEP.

1. Introduction
Meloxicam is a potent non-steroidal anti-inflammatory drug (NSAID) that has been shown to be an effective analgesic and anti-inflammatory in adult horses at a dose rate of 0.6 mg/kg, PO, q 24 h. Pharmacokinetics and safety of this drug have not been reported in foals <6 wk of age.

2. Materials and Methods
This project was conducted as three separate studies to determine pharmacokinetics of a single oral dose of meloxicam in foals <6 wk of age (n = 10), to evaluate pharmacokinetics associated with repeated dosing for 2 wk (n = 4), and to assess drug safety (n = 10). Foals were monitored by daily examination, clinical pathology, gastroscopy, abdominal ultrasound, and urinalysis.

3. Results
The administration of a single oral dose of 0.6 mg/kg meloxicam to foals resulted in mean peak plasma concentrations of ~1000 ng/ml. Repeated dosing (0.6 mg/kg, PO, q 12 h) was well tolerated and resulted in plasma concentrations likely to be therapeutic. All foals remained healthy for the duration of each study.

4. Discussion
There were no adverse effects associated with the administration of single or repeated doses of meloxicam to healthy foals <6 wk of age. Because of more rapid clearance, the drug should be administered every 12 h to foals. Repeated administration for up to three times the recommended duration of treatment or at three times the recommended dose rate was not associated with adverse clinical effects. The meloxicam oral suspension used in these studies is available under permit from Troy Laboratories Pty Ltd, Australia.

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