Efficacy of Valacyclovir Against Clinical Disease After EHV-1 Challenge in Aged Mares

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Oral valacyclovir therapy initiated before equine herpes virus-1 infection and continued 2 wk after infection offered the best protection against clinical signs of disease. However, delay of therapy until the onset of fever also reduced signs of viral disease. Authors’ addresses: Department of Physiological Sciences, Oklahoma State University, Stillwater, OK 74078 (Maxwell, McFarlane); Hagyard Equine Medical Institute, 4250 Ironworks Pike, Lexington, KY 40511 (Bentz); Department of Veterinary Clinical Sciences, Oklahoma State University, Stillwater, OK 74078 (Gilliam, Holbrook, MacAllister); Department of Pathobiology, Oklahoma State University, Stillwater, OK 74078 (Ritchey, Eberle); Oklahoma Animal Disease Diagnostic Laboratory, Oklahoma State University, Stillwater, OK 74078 (Rezabek); Center for Veterinary Health Sciences and Department of Statistics, College of Arts and Sciences, Oklahoma State University, Stillwater, OK 74078 (Goad); and Department of Veterinary Science, University of Kentucky, Lexington, KY 40546 (Allen); e-mail: lk.maxwell@okstate.edu. © 2008 AAEP.

1. Introduction
Evidence of effective drug therapy would increase the therapeutic armament available to clinicians during an outbreak of equine herpes virus-1 (EHV-1). This study tested if prophylactic therapy with valacyclovir or initiation of therapy at the onset of fever would offer different levels of protection against signs of viral disease.

2. Materials and Methods
Eighteen aged mares were randomized to treatment: no therapy (control), therapy at onset of fever, and prophylactic therapy. Oral valacyclovir therapy consisted of a 2-day loading regimen: 27 mg/kg, q 8 h followed by 18 mg/kg, q 12 h for 7 days (Period 1) or 14 days (Period 2) after challenge with EHV-1. The effects of treatment on rectal temper-
ature and clinical score (heart and respiratory rates, submandibular lymph-node size, nasal or ocular discharge, and demeanor) were tested using a repeated measures 2-way or a non-parametric one-way analysis of variance (ANOVA), respectively.

3. Results
The duration of fever post-challenge was 3 days less in the prophylactic-therapy group and 1.75 days less in the febrile-therapy group compared with the control group (p < 0.05). The median clinical score was 56% lower in the prophylactic-therapy group that received 2 wk of valacyclovir compared with the control group (p < 0.05).

4. Discussion
Valacyclovir therapy significantly decreased signs of EHV-1 disease. The protective effect was greatest when therapy was initiated before viral infection and continued for 2 wk. However, initiation of therapy at the onset of fever also decreased signs of disease as compared to control horses. These encouraging results should be viewed cautiously in light of the small number of horses studied.

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Footnote

aValtrex, GlaxoSmithKline, Mississauga, Ontario, Canada L5N 6L4.