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Alpha Blockade Inhibits Induced Ocular Shedding of Latent HSV-1

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Non-specific beta blockade promoted recurrent ocular shedding of latent HSV-1 in the mouse iontophoresis model. The present study examined the effect of thymoxamine, a non-specific alpha blocker, on reactivation and ocular shedding in the same mouse model. Latent trigeminal ganglionic infection was established in Balb C mice following inoculation by corneal scarification with HSV-1 W strain and confirmed by co-cultivation. On Day 30 post-infection (p.i.), the mice were divided into two groups, and treatment begun with coded eye drops (thymoxamine or placebo) BID OU for 5 days. On Day 31 p.i., iontophoresis with 1% 6-hydroxydopamine was performed, and daily treatment with topical epinephrine and 1% prednisolone was begun. Reactivation and recovery of latent HSV-1 was determined by daily ocular swabs, and characteristic HSV-1 cytopathic effect in Vero cells. We found the thymoxamine-treated group had significantly fewer positive eyes (P <.01), multiple shedding episodes (P <.02), and total shedding days (P <.001) than the control group. We conclude that alpha blockade appears to inhibit induced ocular shedding of latent HSV-1 in the mouse iontophoresis model.

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Effect of LY253963 on Ferret Body Temperature Following Influenza Virus Infection.

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LY253963, the sodium salt of 1,3,4-thiadiazol-2-ylcyanamide has broad spectrum in vitro activity, and is effective in treating both type A and type B influenza virus infections in mice. In the present study, we examined the effect of LY253963 on the increase in anal temperature of ferrets caused by infection with Great Lakes B influenza virus. Temperature measurements were made on all animals 24 hours preinfection, and at selected intervals for 170 hrs post infection. Treated animals were given a single intraperitoneal dose of LY253963 (ranging from 3.12 to 25 mg/kg) within 1 hour post-infection. In untreated ferrets no temperature difference was noted between infected and uninfected animals for 10 hours postinfection, with a substantial temperature increase occurring in infected animals at 15 hours, and lasting through the 37 hour time point. Treated animals showed a significant reduction in temperature increase in a dose related manner, with partial protection being observed at the low dose of 3.12 mg/kg. An effort was made to quantitate virus growth by examining virus shedding in the nasal cavity, however there was no significant difference between treated and untreated animals indicated by the amount of virus recovered from nasal washings.