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Effect of Combined Treatment with Antibody and Acyclovir on Neonatal HSV Infection in Guinea Pigs. F.J. Bravo, N. Bourne, M.G. Myers and D.I. Bernstein. Child. Hosp. Res. Fdn., and J.N. Gamble Inst. Med. Res., Cincinnati, OH, U.S.A.

Use of acyclovir (ACV) has improved outcome in neonatal HSV infection but morbidity and mortality remain high. The role of antibody (Ab) in neonatal disease is unclear. Using our guinea pig model of neonatal HSV infection we have shown that both ACV and Ab were protective when administered immediately after viral inoculation (PI). In the present report, we studied the effect of high titer polyclonal anti-HSV Ab alone and combined with ACV when administered begining on d2 and d3 PI. Newborn Hartley guinea pigs were inoculated intranasally at 24-48hr of life with 5.5 $\log_{10}$ pfu HSV-2 MS strain and randomized in 9 groups (n = 16-17/group) to receive ACV (30 mg/kg/dose x 10d b.i.d. IP) or Ab (3ml IP twice, 48 hr apart), or the combination. Animals were followed acutely for vesicular rash, respiratory, eye and CNS symptoms, and for recurrences for 30 d. Mortality in the groups was as follows:

Rx	UnRx	ACV	ACV	ACV	Ab	Ab	Ab	Comb	Comb
Onset Rx		d0	d2	d3	d0	d2	d3	d2	d3
%	82.4	43.8	68.8	81.3	16.7	31.3	81.3	31.3	43.8

These results suggest that passively administered Ab is protective when given alone early after infection, and that outcome may be improved by adding Ab to ACV at later stages.

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Modification of Primary and Recurrent Genital Herpes in Guinea Pigs by Passive Immunoprophylaxis. N.Bourne and L.R.Stanberry. Childrens Hospital Research Foundation, Cincinnati OH USA

Post exposure prophylaxis with high titer anti-viral antibody is effective in controlling several diseases including varicella and rabies. We examined the effect of passively administered anti-HSV-2 antibody on genital herpes in Hartley guinea pigs. Animals were inoculated by intravaginal instillation with HSV-2 MS strain and were randomized to receive 5 ml of high titer (1:32000 by ELISA) anti-HSV-2 antibody by intraperitoneal injection 24 or 72 hours post inoculation (PI) or serve as untreated controls. Clinical primary disease developed in 12/12 untreated controls, 6/15 animals treated at 24 hours PI and 11/16 guinea pigs treated at 72 hours PI. Among animals experiencing primary disease, treatment with antibody 24 hours PI significantly reduced severity as measured by the mean area under the lesion score-day curve compared to untreated controls (3.5±0.9 vs 8.8±1.1; $p<0.05$). Animals treated at 72 hours experienced disease of intermediate severity (6.2±0.7). Animals were assessed for recurrent disease from days 22-63 PI. Of those experiencing recurrences there was no difference in the mean number of days recurrences were seen between controls and animals treated 72 hours PI (10.7±1.8 and 10.8±1.1). However, in animals treated 24 hours PI the mean was significantly reduced (1.9±0.6; $p<0.01$). Further studies appear warranted to determine possible clinical applications for passive immunoprophylaxis in controlling genital herpes.