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Therapeutic Effect of L-HSA-AraAMP on Serum DHBV-DNA in DHBV Infected Duckling.

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Beijing Duckling hatched within 1 day was selected to study the therapeutic effect of a liver-targeted antiviral drug, L-HSA-AraAMP on hepadnavirus replication. Twenty-one ducklings were infected with duck hepatitis B virus (DHBV) intravenously, 7 days after infection, the ducklings were divided into 3 groups and treated with AraAMP(group Ⅰ) and L-HSA-AraAMP(group Ⅱ) respectively for 10 days. The control group (group Ⅲ) were treated with normal saline instead of drugs in the same schedule. All the ducklings were bleeding before, during and after treatments at different times. Serum level of DHBV-DNA were detected in order to compare the dynamics of DHBV marker in sera for evealuation of the therapeutic effects. The results showed that DHBV-DNA levels remained unchanged in group Ⅲ, in contrast, they were consistently lower after 2 days of drug admination and decreased down significantly on the 5th of treatment ($P<0.05$), but lasted up to 3-4 days after cessation of the treatment in group Ⅰ. L-HSA-AraAMP showed therapeutic effects as well as AraAMP, but the effect of DHBV-DNA inhibition in group Ⅱ lasted to post with drawal. The dose of AraAMP in group Ⅱ was 16 times less than in group Ⅰ. These results indicate that the dosage of AraAMP required to inhibit hepadnavirus growth can be sharply reduced by coupling the drug to L-HSA.

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Antiviral Activity of CH_{31} Against HHV-6 in Vitro.

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CH_{31}, an aqueous extract of Alternanthera philoxeroides (Mart.) Griseb., was found to have potent antiviral activity against HHV-6. HSB-2 cell cultures productively infected with human herpesvirus-6 (HHV-6) were treated with CH_{31} and the antiviral drug acyclovir (ACV). ACV showed significant toxic effect on uninfected HSB-2 cells, yet only incompletely inhibited viral replications upon infection of the cells. Uninfected HSB-2 cells appeared to have two times of 3-4 days. CH_{31} added to celture HSB-2 cells, however, was found to provide a striking protective effect against both the cytopathic effect of the virus and the expression of viral antigens detected by the indrect IFA at the highest concentrations, but bellow the toxic dose. Our results show that CH_{31} appears to be a potent anti-herpesvirus drug. The effect of CH_{31} on the cycle of viral infection will require further analysis in order to determine dose response and the time course of inhibition.