Tropical Medicine and Health
Vol. 32 (2004) , No. 1 p.15

IN VIVO EVALUATION OF COMBINATION EFFI CHLOROQUINE WITH CEPHARANTHIN® OR M HYDROCHLORIDE AGAINST BLOOD-INDUCED CHLOROQUINE-RESISTANT *PLASMODIUM BE* INFECTIONS

AKIRA ISHIH[1)], TOHRU SUZUKI[1)], TAKAKO HASEGAWA HWANG-HUEI WANG[3)] and MAMORU TERADA[1)]

1) Department of Parasitology, Hamamatsu University Sch
2) Department of Phamacy, Hamamatsu University School
3) Department of Medicine, China Medical College

(Accepted December 12, 2003)

Abstract: The combination effects of chloroquine with Cepharanth

hydrochloride were evaluated against a blood-induced infection wit
P. berghei NK 65 in ICR mice. The infected mice in an untreated
progressively increasing parasitemia leading to mouse death. A two
base/kg of chloroquine alone produced little effect against *P. bergh*
all mice died from day 13 to 15 with an increasing parasitemia. A fc
mg/kg of Cepharanthin® alone produced no antimalarial activity, an
10. A four-day dosage of 50 mg/kg of minocycline hydrochloride a
effect, but all mice died by day 18. Furthermore, mice given chloroq
Cepharanthin® died from day 14 to 15. Mice given Cepharanthin®
hydrochloride also died from day 15 to 17. On the other hand, infec
chloroquine plus minocycline hydrochloride survived during the exp
with chloroquine alone, minocycline hydrochloride alone, chloroquir
or Cepharanthin® plus minocycline hydrochloride showed low paras
drug administration and a few subsequent days, but then malaria pa
the bloodstream of the treated mice until death. On the other hand,
mice given chloroquine plus minocycline hydrochloride decreased c
not be detected by microscopic examination during the observation
strongly suggests that the combination effects of chloroquine and mi
are worthy of evaluation in human malaria. The results also clearly
and importance of in vivo experiments in estimating the activities of

Key words: *Plasmodium berghei* NK 65, Cepharanthin®, minoc
activity, chloroquine-resistance