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TOXICOPATHOLOGICAL STUDIES ON THE EFFECTS OF
MALARIA AND HEXACHLOROCYCLOHEXANE IN MICE

BY

NIPA IM-EMGAMOL

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Nipa Im-emgamol

Department of Pathobiology, Faculty of Science

Mahidol University, Bangkok

ABSTRACT

This present study was designed to elucidate the combined effects of HCH and malarial infection in mice. Mice in malarial control Group 3, malaria and HCH combination group 4 were injected intraperitoneally with 10^4 parasitized erythrocytes on day 0 and injected intramuscularly with Fansidar (1.0mg Pyrimethamine/Kg. BW.) on days 6, 7 and 8. Control diet was given to mice in normal control Group 1 and malaria control Group 3 and 500 ppm technical HCH diet was started in HCH control Group 2, malaria and HCH combination Group 4 on day 13 (week 0) until the 24th week. Pathological, biochemical and hematological findings were evaluated. Significant changes were observed in Groups 2 and 4 as followed: decrease diet consumption, decrease body weights, increase relative liver weights, increase hematocrit value, initial increase of SGOT,

SGPT and ALP (week 2) with late decrement in these enzymes level (24 week), malaria effected to decrease transaminase activities during weeks 2 to 4 ,increase urinary protein during weeks 2 to 4, presence of altered cell foci in combination of malaria and HCH mice in week 8 (33 %), week 16 (25 %), week 24 (7 %) and HCH fed mice in week 24 (50 %). Although the preneoplastic lesion could be induced in mice by HCH alone, our studies suggested that the combination of malaria and HCH promoted the development of precancerous lesion that will lead to a true hepatic neoplasm in further long term experiment.

