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JONGKOL AKAHAT : MHC CLASS II ALLELES AND IMMUNE RESPONSE TO HEPATITIS B VACCINATION IN THAIS. THESIS DVISOR: PIMOL CHIEWSILP M.D. , URUSA THEPPISAI M.D. , TASANEE MONGKOLSUK M.Sc. (PATHOBIOLOGY), KANCHANA SUJIRACHATO Ph.D. 100 p. ISBN 974-589-168-1

The study was conducted to examine the distribution of human leukocyte antigens (HLA) class II in association with the immune response to hepatitis B vaccine (HB vaccine). The subjects were grouped according to the results of serologic tests for hepatitis B virus (HBV). For children who had hepatitis B surface antigen (HBsAg) positive mothers, received hepatitis B immune globulin (HBIG) were vaccinated at birth. The majority of cases responded to the vaccination indicated by the production of anti-HBsAg (responders; n=72), while few of them failed in antibody production (non-responders; n=5). The mothers were divided into two groups; carriers (n=54) who were persistently positive for HBsAg (> 6 months) and transiences (n=10) who had spontaneously recovered from HBV infection.The controls were healthy volunteers with no detectable HBsAg in their sera.

After serological assignment of HBV markers, HLA class II typing was performed on all subjects by conventional polymerase chain reaction (PCR)-sequence specific oligonucleotides (SSO) and a nonradioactive detection system. HLA antigen frequency differences between groups were compared using the chi square (χ^2) test with Fisher's exact test in cases of small samples.

In these studies, it was found that HLA-DR2, DR4 and DRB1*1001 played a role in protection. In contrast DRB1* 0901 is associated with susceptibility to HBV and persistent HBV infection. HLA-DRB1*14 with combined subtypes DRB1* 1401 , 1404, 1405 and 1412 were significantly increased in non-responders while HLA-DRB1* 08032 was significantly increased in the responder group.