

Thesis Title Diagnosis of Intestinal Amoebiasis Using Salivary IgA Antibody
Detection

Name Paibulaya Punthuprapasa

Degree Master of Science (Public Health)
major in Infectious Disease

Thesis Supervisory Committee

Udomporn	Chularerk,	M.D., M.P.H., M.S.P.H.
Nitaya	Thammapalerd,	B.Sc., M.Sc.
Manoon	Bhaibulaya,	M.D., D.T.M.&H., Ph.D.
Kawi	Charoenlarp,	M.D., D.T.M.&H.
Sirivan	Vanijanonta,	M.D., D.T.M.&H.

Date of Graduation 15 March B.E. 2539 (1996)

ABSTRACT

This study attempted to use soluble antigen extracted from axenic culture of *Entameba histolytica*, HK-9 strain to detect salivary IgA antibodies against *E. histolytica* in intestinal amoebiasis patients by an indirect enzyme-linked immunosorbent assay (ELISA). The assays were applied to detect IgA anti-amoebic antibodies in saliva samples of 109 individuals. The samples were divided into four groups. Group 1 comprised 32 individuals whose stools were positive only for *E. histolytica* cysts and/or trophozoites. Group 2 comprised 12 individuals whose stools were positive for *E. histolytica* and other intestinal parasites. Group 3 comprised 36 individuals whose stools were negative for *E. histolytica* but containing other intestinal parasites such as *E.coli*, *E.nana*, *B.hominis*, *T.hominis*, *G.lambli*a, *O.viverrini* and Hookworm. Group 4 comprised 29 health individuals whose stools were free from any intestinal parasitic infection.

Based on the mean optical density (OD) plus 2 standard deviations (SD) of the results from 29 parasitologically negative healthy individuals, the cut off OD value for salivary IgA antibodies were 1.265. Therefore, the assays were positive in 14 out of 32 (43.75%) of group 1 and 2 out of 12 (16.67%) of group 2, respectively. The assays were positive in 16 out of 36 (44.44%) for group 3 whereas 2 out of 29 (6.90%) for group 4 were positive. The overall sensitivity and specificity of the assays were 36% and 72%, respectively. The false positive rate was 28% and the false negative rate was 64%. The predictive value of positive and negative results were 47% and 63%, respectively. The diagnostic accuracy of ELISA for the presence of salivary IgA antibodies was 58%.