

CHAPTER IV

RESULTS

1. Characteristics of the study populations in 5 Districts, of Tak province Thailand, according to their infection status

A total of 5,468 individuals in 5 districts, were clinically examined and test for microfilaria (mf), circulating filarial antigen (CFA) and anti-*Wolbachia* specific IgG1, IgG2, IgG3 and IgG4 antibodies. Fifty eight volunteers, 39 (67.24%) males and 19 (37.76%) females, were recruited into the study. The age of all participants ranged from 6 to 71 years (mean = 32.89 years) (Table 2). Thirty-nine individuals were infected with lymphatic filariasis, aged 6-71 years (mean = 32.89 years). Circulating filarial antigens were detected in 35 (60.34%) individuals. Out of the 35 antigenemic cases, there were 16 (45.7%) microfilaria-positive cases (Ag+/Mf+). Clinical manifestations of lymphatic obstruction were observed in 4 individuals.

Table 2 Demographics details of the study population in the study.

	Infection status			
	Asymptomatic patients			Symptomatic patients
	Mf-/ICT-	Mf-/ICT+	Mf+/ICT+	Chronic pathology
No. of patients	19	19	16	4
Males/females	11/8	13/6	12/4	3/1
Mean age in years (range)	31.37 (14-59)	32.89 (6-71)	26.75 (10-55)	57.50 (45-80)
mf GMI, mf/ml	181.62	-	-	-

2. Anti-rWSP IgG1, IgG2, IgG3, and IgG4 antibody levels in patients with bancroftian filariasis

The levels of IgG1 antibodies against rWSP were significantly higher in patients with active infection, as indicated by antigenemia, but without symptoms (Ag+/Mf+ and Ag+/Mf-) (mean OD = 0.13) than the endemic normals (Ag-/Mf-) (mean OD = 0.07, $P < 0.05$), but not statistically different from the patients with chronic pathology (CP) (mean OD = 0.25, $P > 0.05$) (Figure 6). However, the anti-rWSP IgG1 antibody levels among microfilaremic patients (mean OD = 0.13) were not statistically different from amicrofilaremic patients (mean OD = 0.13, $P > 0.05$).

The levels of IgG3 antibodies against rWSP were significantly higher in patients with active infection (mean OD = 0.08) than the endemic normals (Ag-/Mf-) (mean OD = 0.02, $P < 0.05$) (Figure 8). Furthermore, the anti-rWSP IgG3 antibody levels were statistically higher in amicrofilaremic patients (mean OD = 0.13) compared to microfilaremic patients (mean OD = 0.02, $P < 0.05$). However, patients with chronic pathology and endemic normals did not show a significant difference in the levels of anti-rWSP IgG3 antibody (mean OD = 0.03 and 0.02, respectively) ($P > 0.05$).

In contrast to the anti-rWSP IgG1 and IgG3 antibody levels, the levels of IgG2 and IgG4 antibodies against rWSP among all groups were not significantly different ($P > 0.05$) (Figure 7 and 9, respectively).

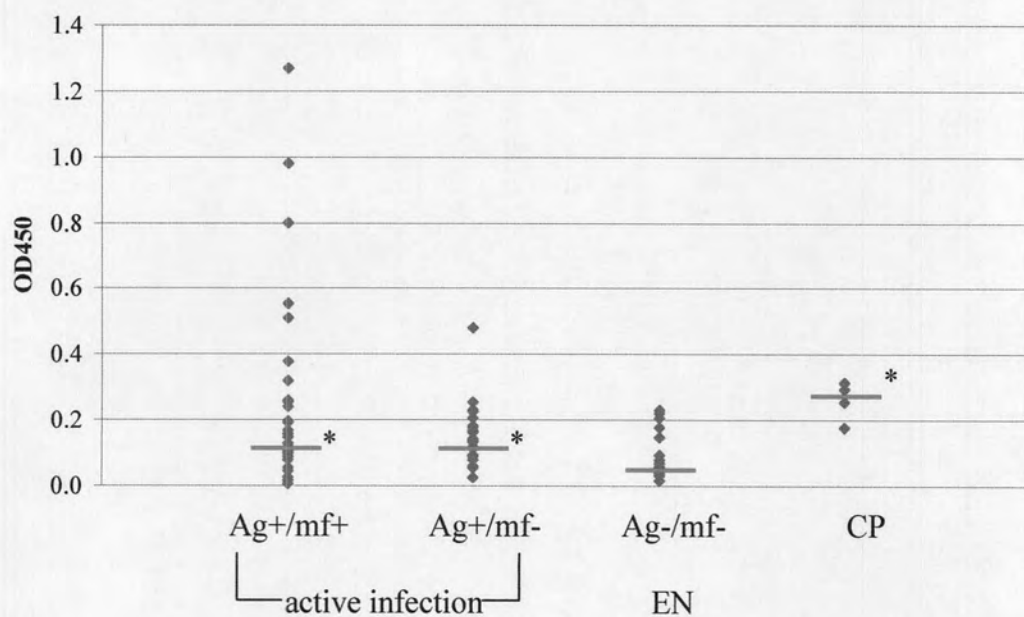


Figure 6 Optical density (OD450) values for anti-rWSP IgG1 antibodies in microfilaremic patients (Ag+/Mf+), amicrofilaremic patients (Ag+/Mf-), endemic normals (Ag-/Mf-), and patients with chronic pathology (CP), by ELISA. Bars indicate the geometric means. * Significant difference ($P < 0.05$) compared to endemic normals by using unpaired t-test.

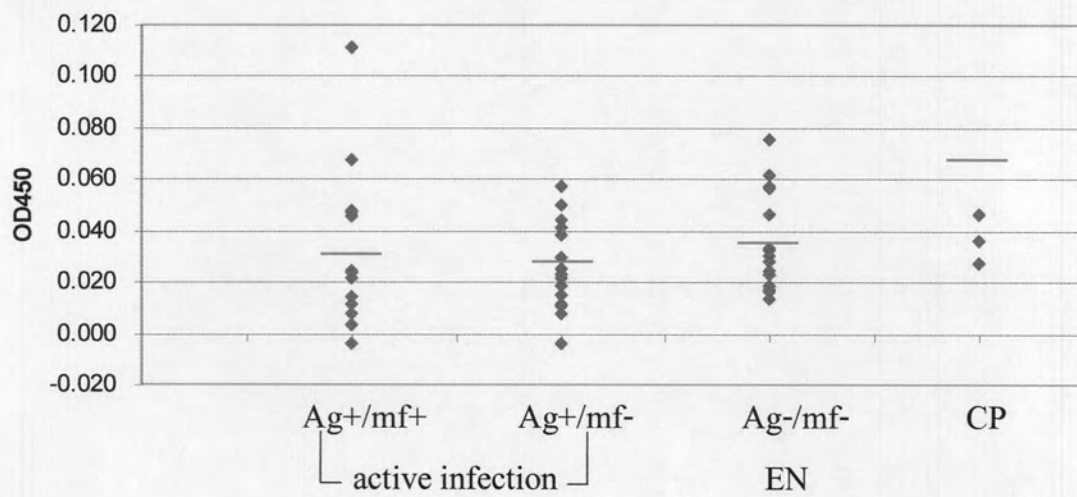


Figure 7 Optical density (OD450) values for anti-rWSP IgG2 antibodies in microfilaremic patients (Ag+/Mf+), amicrofilaremic patients (Ag+/Mf-), endemic normals (Ag-/Mf-), and patients with chronic pathology (CP), by ELISA. Bars indicate the geometric means.

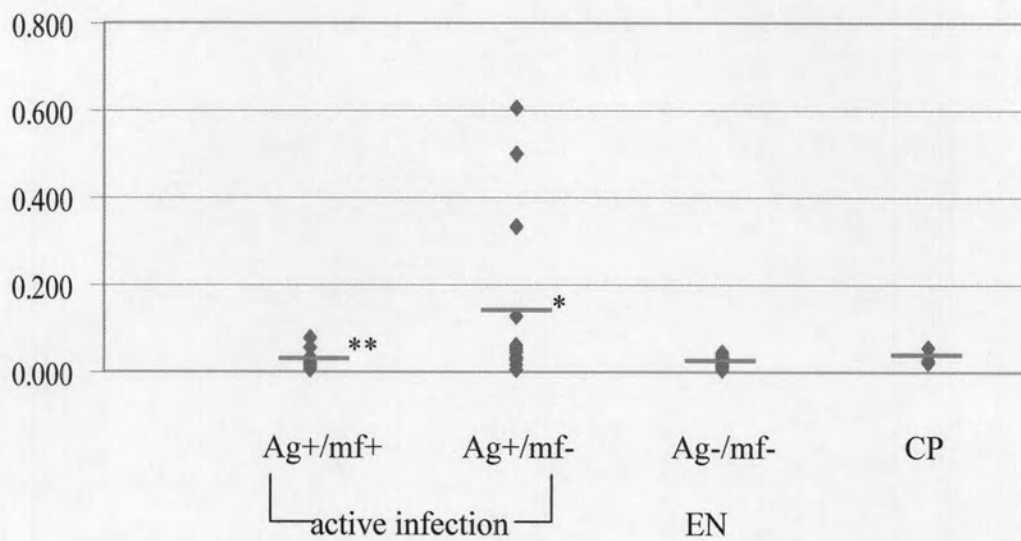


Figure 8 Optical density (OD450) values for anti-rWSP IgG3 antibodies in microfilaremic patients (Ag+/Mf+), amicrofilaremic patients (Ag+/Mf-), endemic normals (Ag-/Mf-), and patients with chronic pathology (CP), by ELISA. Bars indicate the geometric means. * Significant difference ($P < 0.05$) compared to endemic normals by using unpaired t-test. ** Significant difference ($P < 0.05$) compared to amicrofilaremic antigenemia patients by using unpaired t-test.

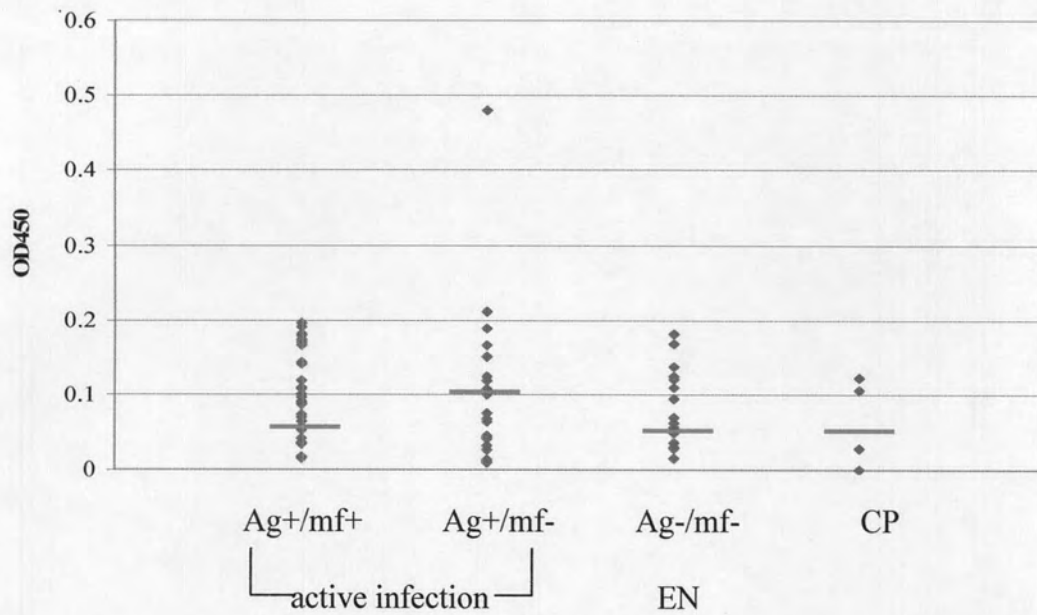


Figure 9 Optical density (OD450) values of the ELISA reaction for anti-rWSP IgG4 antibodies in microfilaremic patients (Ag+/Mf+), amicrofilaremic patients (Ag+/Mf-), endemic normals (Ag-/Mf-), and patients with chronic pathology (CP), by ELISA. Bars indicate the geometric means.