

## CHAPTER V

### CONCLUSION

Serum and red cell cholinesterase levels were determined in Thai male and female blood donors for a control group and in patients with chronic and acute organophosphate insecticide poisoning, in patients with various diseases such as infectious hepatitis, malarial infection, thalassemia, congenital heart disease and in pregnancy and cord blood by the colorimetric technique.

There were no significant difference between the mean values of serum and red cell cholinesterase of the male and female blood donors.

Serum cholinesterase level in insecticide exposed subjects were significantly lower than that of the normal subjects. The directly exposed subjects had lower serum cholinesterase activity than those of the non-directly exposed subjects. There was no significant difference between their red cell cholinesterase activities and those of the normal subjects. Serum and red cell cholinesterase levels in these workers also showed no correlation to the duration of insecticide exposure.

Both serum and red cell cholinesterase activity were markedly depressed in patients with organophosphate and carbamate poisoning. The recovery of serum and red cell cholinesterase activities were very slowly and were still very low on day 4 of admission.

The mean values of serum cholinesterase in patients with infectious hepatitis and patients with malarial infection were found to be lower than that of the normal subjects. After treatment, the low serum cholinesterase levels of these patients returned to the normal level within 4 weeks.

Serum cholinesterase level in patients with  $\beta$ /E and Hb-H thalassemia were found to be lower than that of the normal values and red cell cholinesterase levels in patients with  $\rho$ /E thalassemia were found to be higher than that of the normal values.

There were no significance difference between the mean values of serum and red cell cholinesterase levels in patients with congenital heart disease and the normal subjects.

Both serum and whole blood cholinesterase levels of pregnancy in the first, second and third trimester were significantly lower than the non-pregnant women. Red cell cholinesterase levels in cord blood samples were significantly lower than that of the adult values but there was no significant difference between serum cholinesterase levels in cord bloods and the normal adult values.

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