

INTRODUCTION: *W. bancrofti* is a multi-cellular organism and its elimination is most likely to be by extracellular mechanisms mediated by free radicals. Changes in blood levels of free radicals may therefore account for the wide spectrum of clinical manifestations observed in this infection.

OBJECTIVE: Measure levels of antioxidants in the blood (as a measure of oxidants), in normals and asymptomatic microfilaraemic carriers living in an endemic area.

METHOD: Blood levels of catalase (C), glutathione peroxidase (GPX) and superoxide dismutase (SOD) were assayed in 29 subjects with asymptomatic microfilaraemia (mf) and 29 endemic normals defined by negative mf on micropore filtration, ICT test and negative filaria antibody (FAT) test. An endemic normal was selected from among the mf positive subjects' family (age- and sex-matched), and blood samples of both were obtained at the same time. Analysis of blood was done within 6 hours of collection.

<u>Mf+ve Cases</u>			<u>Endemic Normals</u>			<u>Non-endemic Controls</u>		
Male:Female 12:17		Age 36yrs(16)	Male:Female 16:13		Age 34yrs(14)	Male:Female 16:13		Age 33yrs(14)
Mean	SD	Range	Mean	SD	Range	Mean	SD	Range
Catalase(ku/l)								
0.6*10 ⁵	0.19	0.31-1.1	0.8*10 ⁵	0.17	0.5-1.15	0.9*10 ⁵	0.24	0.5*1.27
Control vs mf + ve: p<0.001*, control vs endemic normal: p<0.001*, mf+vs endemic normal: p=0.2*								
Superoxide dismutase(u/ml)								
2.2*10 ²	0.2	1.7-2.5	2.2*10 ²	0.52	1.6-3.4	2.0*10 ²	0.58	1.3-2.9
Control vs mf + ve: p=0.7*, control vs endemic normal: p=0.2*, mf+vs endemic normal: p=0.2*								
Glutathione peroxidase(u/l)								
5.7*10 ³	1.8	2.9-10.2	2.2*10 ²	0.52	1.6*3.4	2.0*10 ²	0.58	1.3-2.9
Control vs mf + ve: p=0.89*, control vs endemic normal: p<0.001*, mf+vs endemic normal: p<0.001*								

CONCLUSIONS: Serum GPX levels were significantly greater in endemic normals when compared to asymptomatic microfilaraemics reflecting high oxidant levels in the blood of these individuals. This may enable endemic normals to resist filarial infection.