

NADH-Methemoglobin Reductase and Reticulocytosis

TO THE EDITOR:

Magna and Beiguelman⁽⁵⁾ have shown that the activity of NADH-methemoglobin reductase varies widely among leprosy patients under dapsone treatment and is negatively correlated to their hemoglobin level. Since dapsone has a hemolytic effect⁽¹⁾, while NADH-methemoglobin reductase is more active in younger than in older erythrocytes^(3,4), it was supposed that this correlation might be due to an increase in the reticulocyte rate in leprosy patients.

This hypothesis was tested by studying venous blood samples of leprosy patients (30 males and 30 females) submitted to chronic sulfone therapy. The activity of NADH-methemoglobin reductase was determined according to Scott's method⁽⁶⁾ slightly modified, and the hemoglobin level was determined following Benesch, *et al.*'s method⁽²⁾. The reticulocyte rate was obtained as usual. The mean and standard de-

viation of the variables studied are given in The Table.

In the present study, no significant correlation was found between the NADH-methemoglobin reductase activity and the hemoglobin level ($r = -0.05$ in males and $r = 0.20$ in females) or between the former and the reticulocyte rate ($r = 0.04$ in males and $r = -0.23$ in females).

It also seems important to point out that in the samples analyzed in the present study the NADH-methemoglobin reductase activity among females was significantly higher as compared to males.

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THE TABLE. *Mean values (\bar{x}) and standard deviations (s) of NADH-methemoglobin reductase activity ($10^4 \cdot A_{600}/\text{min}$), hemoglobin level (g%) and reticulocyte rate (%) of 60 adult leprosy patients under sulfone therapy.*

Variable	Sex	\bar{x}	s
NADH-methemoglobin reductase	M	43.54	10.76
	F	61.73	14.14
	M + F	52.63	15.48
Hemoglobin	M	13.16	1.52
	F	11.05	1.95
Reticulocytes rate	M	2.34	1.41
	F	2.41	1.63
	M + F	2.38	1.51

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