INTERNATIONAL JOURNAL OF LEPROSY Volume 44, Numbers 1 & 2
Printed in the U.S.A.

DDS RESISTANCE IN ETHIOPIA - A PROGRESS REPORT

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SUMMARY

Our programme on the investigation and treatment of patients with dapsone (DDS) resistance in Ethiopia has been conducted on an out-patient basis. The degree of supervision is therefore limited, though we have attempted to monitor trial patients for the presence of DDS in their urine to assess regularity of drug intake (1). In addition it has so far proved possible to determine DDS sensitivity of M.leprae by the mouse foot-pad test only in some 40% of cases. Nevertheless, only 2 patients suspected of DDS resistance have been proved to be DDS sensitive.

We have investigated 243 patients who were suspected of developing DDS resistance. About half the cases (118) have shown further relapse during a period of trial treatment with DDS, and they had their treatment changed to another drug; the remainder are continuing DDS treatment under close supervision.

Results of foot-pad tests show that 45 of the patients who relapsed during trial treatment are DDS resistant; results are awaited from tests on a further 51 patients. A high proportion of the patients in our study are attending for treatment in Addis Ababa, where about 3000 patients, including some 1500 lepromatous cases, are registered for treatment. The rate at which patients with suspected DDS resistance are appearing in this lepromatous group of cases is shown as follows.

TABLE 1. Annual incidence of cases showing prima facie evidence of DDS resistance from about 1500 lepromatous patients registered for treatment in Addis Ababa.

Year	Suspected new cases	Total cases
1972		41
1973	56	97
1974	63	160
1975 (1st eight months)	37	197

This represents an incidence of 3% per annum of patients with lepromatous leprosy. If unchecked, about 30% of lepromatous patients in Addis Ababa will show DDS resistance by 1980.

The problem of DDS resistance in Ethiopia is greater than has been reported elsewhere (2). Also cases are appearing after unusually short periods of treatment, and the degree of resistance shown by mouse foot-pad tests is usually low. We think it is likely that the lower dosage of DDS used for the past decade in Ethiopia accounts for these findings. The prevention of DDS resistance should be considered as 2 separate problems:-

1) Patients with previously untreated lepromatous leprosy. In these patients treatment using the principles already well accepted in the field of tuberculosis (full dosage ab initio using two or more effective drugs with differing modes of action) should reduce the incidence of DDS resistance to acceptable levels. Studies are needed to test suitable drug combinations, and to determine the duration of multiple therapy that is required.

2) Patients with lepromatous leprosy who are already under treatment, particularly those whose treatment was initiated

with DDS in low dosage. Many of these will be harbouring DDS resistant bacilli. Supplementary drug regimens must be designed which will reduce the incidence of DDS resistance in this group of patients.

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