A-03: Efficacy of annual single dose treatment with diethylcarbamazine citrate against nocturnally periodic *Wuchereria bancrofti* in Matara

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In Bancroftian filariasis, the recommended treatment is the 12 daily doses of 6 mg/kg b.w. of diethylcarbamazine citrate (DEC) to reach an individual dose of 72 mg/kg b.w. In practice, this regimen is difficult to maintain because of poor compliance. Recently single annual or six monthly dose of DEC (6 mg/kg body weight) was reported as effective in reducing mf rates and density of subperiodic W. bancrofti in French Polynesia.

In an experiment at Matara, 35 carriers were treated with a single dose of DEC at 6 mg/kg b.w. under direct observation. Prior to treatment, a smear of 60 μl finger prick blood (FP) was prepared from each carrier. Follow up mf counts on 60 μl FP blood smears were carried out 7, 14, 30, 90, 180, 360 days after treatment. Treatment was repeated on the 360th day.

The effect of DEC on mf density was assessed as (a) percentage of carriers where reduced mf count was observed (b) percentage who became negative (c) decrease in mf counts following treatment. Reduced mf counts was noted in 29 (80.6%) of the carriers. Complex clearance of microfilaraemia was observed at 6 months in 22.2%. The decrease of mf density for the whole group from geometric means of counts was 40.5% by day 7 and 78.6% by day 180 and 47.6% by day 360. In 55% of the carriers, the mf density had increased at 360 days. No difference in the mf changes was observed in respect of sex and age groups.

Side reactions included gastrointestinal conditions, allergic reactions, other conditions like headache, joint pains, scrotal pains.

Results suggest that the annual single dose is not as effective here as in the Pacific Trials.

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