



ABSTRACTS OF RECENT CHINESE PUBLICATIONS ON FILARIASIS¹ (X)

70. Song, J.M. & Ma, K. Role of low density microfilaraemia in the transmission of filariasis in areas where bancroftian filariasis is virtually eliminated. Chinese Journal of Parasitology and Parasitic Diseases, 1988, 6 (1): 71 (In Chinese):

Before 1958, the microfilaraemia rate in Zhouxian County, Shandong Province, was as high as 22.2-30.6%. As a result of continuous control measures, filariasis was virtually eliminated in 1974 and was kept at a stable level of 0.01% as assessed at the end of 1980. In 1982-1983 mass screening was carried out in the villages of Daxiwei, Dongsha, Baizhuang No. 1 and Baizhuang No. 2 in which 1339, 875, 1189, and 1194 individuals were examined, respectively. In each village, one microfilaraemia positive case was found and all of them had formerly been positive cases before 1972. In 1983-1985 during the period July to September, a total of 14 569 specimens of Culex pipiens pallens were collected from the four villages then dissected, and 31 of them were found to be positive. From 1982 to 1985, the mosquito densities in human dwellings in these four villages were 9.8, 20.6, 45, and 32.3/15 min/catcher, respectively. The human-biting rate was 15.6-29.7/night for persons using mosquito nets and 55.1-201.2/night for those sleeping outdoors. Mass screenings have been carried out several times, with no new cases detected so far. Of the 4 positive cases, 3 were self-cured in 1985. These results indicated that transmission of the disease was below the transmission threshold.

71. Xin, J.Q., Li, X.P., Mai, F.Z., Lu, X.G. & Tan, Y.P. The indirect fluorescent antibody test using adult Brugia malayi antigen in the surveillance of filariasis. Chinese Journal of Parasitology and Parasitic Diseases, 1988, 6 (1): 62 (In Chinese)

This paper reports the results of the use in filariasis surveillance of the indirect fluorescent antibody (IFA) test with frozen sections of Brugia malayi adult worms as antigen. The investigation was carried out in two different areas: (i) Qiongsan County, Hainan Province, and (ii) Tianyang County, Guangxi Autonomous Region.

In Qiongsan County, 166 cases of bancroftian microfilaraemia were detected before treatment; their serum antibody positive rate in the IFA test was 98.8% (164/166), with a geometric mean reciprocal titre (GMRT) of $1:248.32 \pm 4.44$; the highest serum antibody titre of 1:5120 was recorded in 9 cases. A group of 117 persons from a non-endemic area who had a negative blood examination were tested as controls. Their serum antibody positive rate in the IFA test was 6% (7/117).

¹ The WHO/FIL series has been chosen as a vehicle for issuing abstracts or translations in English of papers on filariasis published in the Chinese medical and scientific press as most of this material is not readily available to interested readers outside China. The numbering of the abstracts in this document is consecutive to that of the abstracts given in the previous WHO/FIL/88.183.

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A group of 149 villagers from a meso-endemic area in Tianyang County were also surveyed and their serum antibody positive rate in the IFA test was 14.1% (21/149), with a GMRT of $1:24.38 \pm 1.48$. Among these persons, 16 had an IFA serum antibody titre of 1:20. After 5 years of prevention and treatment the serum antibody level was observed to have dropped to a very low point.

Analysis of the IFA test results by age group showed no significant difference in the serum antibody positive rates or in the GMRT between children and adults. The IFA test using frozen sections of adult *B. malayi* worms as antigen was found to be a method of choice because of its high specificity, sensitivity, stability and suitability for sero-epidemiological surveillance of filariasis.

72. Wang, Z.Q., Wang, Y.Z., Mei, Y.M., Lin, Z.M., Pan, Z.T. & Guo, X.Y. Observation on changes in serum antibody levels in filariasis patients before and after diethylcarbamazine treatment. Chinese Journal of Parasitology and Parasitic Diseases, 1988, 6 (1): 61-62 (In Chinese)

The enzyme-linked immunosorbent assay (ELISA) using *Brugia malayi* adult worms as antigen was applied to determine the serum antibody levels in 28 bancroftian microfilaraemic patients before and after therapy with diethylcarbamazine (DEC).

Blood samples were taken from each of these patients at different time intervals: (1) before treatment, (2) 4 days after the first treatment course, (3) 4 days after the second treatment course, (4) 4 months after the first treatment course, and (5) 8 months after the first treatment course. The positive ELISA rates were 93% (26/28), 100% (28/28), 61% (17/28), 61% (17/28) and 57% (16/28), respectively, and the corresponding optical density (OD) values were 2.251 ± 0.046 , 0.371 ± 0.080 , 0.220 ± 0.041 , 0.229 ± 0.067 and 0.249 ± 0.066 . There was marked change in the average OD value after treatment, while antibody(ies), though in low titre, persisted in 16 cases for more than 8 months. This was probably due to the production of anti-filaria antibodies stimulated by the large amount of filaria antigens released in the circulation after the destruction of microfilariae and adult worms.