



ABSTRACTS OF RECENT CHINESE PUBLICATIONS ON FILARIASIS<sup>1</sup> (VIII)

59. Chen, Z. D. & Chen, G. Y. Two additional morphological characteristics for differentiating adult Wuchereria bancrofti from Brugia malayi. Chinese Medical Journal, 1986, 99 (10): 845-846 (In Chinese, with English abstract)

Adult Wuchereria bancrofti and Brugia malayi are morphologically similar. Only two differential features in the male worm are well known: the four pairs of ventrolateral papillae in the anal region of B. malayi as opposed to the 8-12 pairs in W. bancrofti, and the rather complex middle part of the longer spicule of B. malayi as opposed to the simple structure of that of W. bancrofti. The present paper describes two additional morphological characteristics of significance in differentiating adult W. bancrofti from adult B. malayi:

(1) In B. malayi, the proximal (keratinous) part of the shorter spicule is translucent and, although its vase-like shape may vary somewhat in certain specimens, it is always quite different from the proximal part of the longer spicule which is narrow and conical in shape and has striations and granules. In W. bancrofti, the proximal part of the shorter spicule is brown in colour and conical in shape with circular striations and coarse granules and is similar to the proximal part of the longer spicule except in length.

(2) In B. malayi, the ratio of the proximal part of the longer spicule to that of the shorter spicule is 2:1 (average 0.138 mm:0.068 mm), while in W. bancrofti the ratio is about 1.5:1 (average 0.185 mm:0.118 mm).

These two definite features have never been mentioned in the literature outside China, and no exceptions were observed in the 18 W. bancrofti and 8 B. malayi specimens obtained from humans. Both characteristics were readily discernible under low power magnification despite the poor condition of some of the specimens. The proximal part ratio difference between the two species can be spotted at a glance without measurement. These two morphological characteristics are of practical importance for identification and diagnosis.

60. Deng, S. S., Shen, L. Y., Zhao, Y., Xu, R. Z., Xia, L. B. & Ren, X. G. Application of ELISA to diagnosis and seroepidemiological survey of filariasis. Journal of Parasitology and Parasitic Diseases, 1986, 4 (4): 280-283 (In Chinese, with English abstract)

Antibody determination using the enzyme-linked immunosorbent assay (ELISA) was carried out on 68 sera from patients infected with Brugia malayi and 85 with Wuchereria bancrofti. It was found that three soluble antigens, B. malayi adult and microfilaria

<sup>1</sup> 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 abstracts given in the previous WHO/FIL/86.180.

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antigen and Dirofilaria immitis adult antigen, possessed similar sensitivity. Adult worm antigen is considered to be the most promising for practical application, because it is relatively easy to obtain from artificially infected birds and to prepare. The sensitivity of ELISA with adult worm antigen was 92.6% for malayan cases and 83.3% for bancroftian cases, its specificity being 98.8%.

Fifty-nine and eighty-five former cases of microfilaraemia, who had been treated with diethylcarbamazine or furapirimidone 5-10 years ago, were examined by ELISA, and 30.5% and 16.5% of them, respectively, remained positive.

A seroepidemiological survey of filariasis using ELISA was carried out on 818 inhabitants living in four endemic villages, one for malayan and three for bancroftian filariasis. The ELISA detection rate was parallel to the microfilaria rate based on parasitological diagnosis, the lowest rates being in children under 10 years of age.

It is suggested that ELISA may be used as an auxiliary diagnostic tool and for seroepidemiological surveys of filariasis.

61. National Technical Steering Group for Filariasis Control and Research. Recent advances in filariasis control in China. Journal of Parasitology and Parasitic Diseases, 1986, 4 (4): 244-245 (In Chinese, with English abstract)

Based upon the statistical data collected by the end of 1985, that were derived from the relevant institutions of control and research in provinces, autonomous regions and municipalities, it appears that filariasis control has made further progress since 1981. During the five years, the blood of 93 789 000 persons was examined and 1 624 000 of these persons were found to be microfilaria positive; a total of 77 562 000 person-times of treatment were given, of which 66 525 000 person-times were given selective treatment plus administration of diethylcarbamazine (DEC)-medicated salt, 8 855 000 person-times were given selective treatment plus mass administration of DEC, and 2 182 000 person-times were given only selective treatment. By the end of 1985, filariasis had been basically eradicated in 660 counties and cities out of the 864 endemic counties and cities; it had been basically eradicated in Shandong and Guizhou Provinces, Guangxi Autonomous Region and Shanghai Municipality. It is estimated that there are still 4 868 000 filariasis cases in all of China, 4 013 000 bancroftian and 855 000 malayan; these cases may also be divided up into 3 226 000 microfilaria positive cases and 1 642 000 cases with signs and symptoms of filariasis and they represent less than 1/6th of the total filariasis cases before implementation of control work.

62. Liu, H. Y. Long-term efficacy of diethylcarbamazine-medicated salt in an endemic area of bancroftian filariasis. Journal of Parasitology and Parasitic Diseases, 1986, 4 (2): 142-143 (In Chinese)

The effect of diethylcarbamazine (DEC)-medicated table salt on bancroftian filariasis was evaluated in an endemic village in Xinyi County, Jiangsu Province. In this village with a population of 1700, the microfilaraemia rate was 20.0% before control. DEC-medicated table salt at a dosage of 3.5 g DEC/1000 g salt was supplied to all the local inhabitants for 5-1/2 months in 1974 and 3 months in 1979. The mean daily intake of DEC was approximately 50 mg per person and the total amount taken in the two courses was 12.75 g (210 mg/kg). Follow-up examinations in 1975, 1978, 1980 and 1984 showed that the microfilaraemia rate dropped to 0.5, 1.2, 0.2 and 0.1% respectively. These data indicate that the second course of DEC medication might have increased the antifilarial effect, and maintained the microfilaraemia rate at a lower level.

63. Shen, J. D. & Shen, S. M. Preliminary report on successful cryopreservation of microfilariae in liquid nitrogen. Acta Zoologica Sinica, 1986, 32 (3): 298 (In Chinese)

Microfilariae of Setaria digitata and Dirofilaria immitis had been cryopreserved in liquid nitrogen with 14% polyvinylprolidone. The microfilariae were found to be actively moving after quick resuscitation, while the unfrozen controls were all dead on the fourth day. When 5% dimethylsulfoxide was used as medium, the above-mentioned microfilariae were also very active after cryopreservation in liquid nitrogen for 6-1/2 days.

64. Li, F. S. Fourteen cases with Loa loa detected in China. Journal of Practical Internal Medicine, 1986, 6 (5): 248 (In Chinese)

Fourteen persons infected with Loa loa, who had worked in Africa for 2-4 years, were effectively treated with furaprimidone or diethylcarbamazine (Hetrazan). The microfilaria clearance rate in the blood was 60-80%, but it was difficult to reduce the clinical symptoms in most of the patients, who experienced relapses during April to October.

Since the vector, Chrysops, is unknown in China, transmission could not occur locally and, therefore, none of the other inhabitants in the areas where these patients were living was infected with the same parasite.

65. Zhang, W. Y. & Zhang, Y. F. A case of subcutaneous dirofilariasis. Chinese Journal of Zoonoses, 1986, 2 (2): 56 (In Chinese)

An immature female nematode was found in a single subcutaneous nodule removed from the top of the head of a 66-year old man living on Helihe Farm, Heilong-jiang Province. The parasite removed from the lesion was slightly motile, silk thread-like, light yellow in colour, 99 mm in length and 0.56 mm in width. Based on its morphological characteristics, this worm was identified to be immature Dirofilaria sp., most probably D. ropens.

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