STUDY ON BANCROFTIAN FILARIASIS USING MONOCLONAL ANTIBODIES

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Well documented serum and urine samples collected from clinical filariasis patients, asymptomatic microfilaraemics and endemic controls, screened for microfilariae by membrane filtration and filarial antibodies by IFAT using Wuchereria bancrofti microfilariae as antigen were used for a study on bancroftian filariasis.

The two-site IRMA was used to detect filarial antigens in serum and samples of urine with monoclonals derived from Onchocerca volvulus, Onchocerca gibsoni and Brugia species. In all assays the monoclonal reacting determinants were present only in a sub-population of W.bancrofti patients & these were also present to some degree in some endemic controls. In the case of the O.gibsoni derived monoclonals (Gib. 1352) it was subsequently shown that this monoclonal is directed against phosphorylcholine and therefore non-specific reactions could occur even in other parasitic infections. In one assay done at the Pasteur Institute, Lille with the Brugia monoclonal a significant difference was observed in the antigen levels in the antigen levels in the urine samples of filariasis patients and endemic controls. When this test was repeated in our laboratory using the same monoclonal antibody we were unable to find significant differences between the antigen levels in the sera and urine of patients and endemic controls.

In a programme to produce monoclonal antibodies against W.bancrofti, species and stage specific monoclonal antibodies have been produced in our Department, against microfilariae of W.bancrofti. They do not seem to be anti-Pc, nor do they take part in cell adherence or antibody dependent cell cytotoxicity (ADCC). After further characterisation these monoclonal antibodies will be used for similar and other assays to test sera and urine of patients for antigens of W.bancrofti.