

# **Bancroftian filariasis in Kwale District of Kenya. III. Quantification of the IgE response in selected individuals from an endemic community**

Estambale, Benson; Simonsen, PE; Vennervald, BJ; Knight, R; Bwayo, JJ

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## **Abstract:**

One hundred and sixty-two individuals from a community in Kwale District, Kenya, endemic for bancroftian filariasis, were selected for a study on the IgE response to filarial antigen (prepared from adult *Brugia pahangi*). Following clinical and parasitological examination, the individuals were grouped into different categories, based on the presence/absence of microfilaraemia, the presence/absence of acute or chronic (hydrocele or elephantiasis) clinical manifestations, and age. The total and filarial-specific IgE responses were evaluated in all individuals, and the responses in the various categories were compared with each other and with the responses of control groups of individuals from filariasis-free areas. The majority of individuals from the endemic area had highly elevated serum concentrations of total IgE. Overall and within each clinical category, the concentration of total IgE was higher in those individuals from the endemic area who had microfilaraemias than in those that did not. The majority of individuals from the filariasis endemic area also had significantly elevated levels of filarial-specific IgE. In contrast, the concentration of specific IgE was lower in subjects with microfilariae than in those without, irrespective of their clinical status. Only a small proportion of total IgE was filarial-specific, the mean value varying from 0.4% to 9.8%, depending on category. Among the endemic individuals, the mean proportion of total IgE which was filarial-specific was 3.6 times higher in the microfilaria-negative than in the microfilaria-positive, indicating that much of the filarial-induced IgE in microfilaraemic individuals could be non-specific. No clear relationship was observed between the IgE response and the clinical manifestations or age of the endemic individuals)