Cross-reaction of antigen preparations from adult and larval stages of the parasite Setaria equina with sera from infected humans with Wuchereria bancrofti

Bahgat MM, Saad AH, El-Shahawi GA, Gad AM, Ramzy RM, Ruppel A and Abdel-Latif M

Department of Therapeutic Chemistry and Infectious Diseases and Immunology Laboratory, Centre of Excellence for Advanced Sciences, National Research Centre
Dokki, Cairo, Egypt.

Abstract

Crude antigenic preparations from Setaria equina were used in ELISA and Western blotting to examine cross-reaction with human sera from areas endemic for bancroftian filariasis. Sera from normal subjects from non-endemic areas were included as negative controls. Cross-reaction was found between S. equina antigens and antibodies in the sera of Wuchereria bancrofti-infected patients, with the highest levels observed between sera of chronic infected patients and Setaria spp. crude female worm surface antigen (CFWSA). In the absence of active transmission of Setaria spp. infection, CFWSA is useful to detect chronic W. bancrofti infection before patients become symptomatic, particularly when chronic patients are known to be microfilaraemic. In the presence of active S. equina infection, antigens from the adult and microfilaraemic stages showed the highest degree of cross-reaction with human sera.

Published In: East Mediterr Health J. 2011 Aug;17(8):679-86