Depression of antigen-specific interleukin-5 and interferon-gamma responses in human lymphatic filariasis as a function of clinical status and age.

Sartono E, Kruize YC, Kurniawan A, Maizels RM, Yazdanbakhsh M.

Department of Parasitology, Leiden University, Netherlands.

Abstract

In an area in which brugian filariasis is endemic, when cytokine levels were analyzed as a function of clinical status comparing those who were asymptomatic and amicrofilaremic with those who were microfilaremic, it was found that both interferon (IFN)-gamma and interleukin (IL)-5 were suppressed in microfilariae carriers (P < .01 and P < .001, respectively), but IL-4 was unabated. Age had a significant effect on cytokine production in both groups. In asymptomatic microfilaremic subjects, IL-4 production was high in young persons and decreased with age, whereas in microfilaremic subjects, IL-4 increased significantly with age. Conversely, IFN-gamma showed a tendency to increase with age in asymptomatic microfilaremic subjects but not in microfilaremic subjects. IL-5 decreased significantly with increasing age in both asymptomatic microfilaremic and microfilaremic groups. These results indicate that the length of exposure to and infection with filarial parasites can each exert a substantial effect on the cytokine response profiles of host T cell populations.

PMID: 9129104 [PubMed - indexed for MEDLINE]