Increased interleukin-4 and interleukin-5 production in response to Schistosoma haematobium adult worm antigens correlates with lack of reinfection after treatment

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Abstract:

Abstract Acquired immunity to human schistosomiasis correlates with increased serum levels of schistosome antigen-specific IgE. Since interleukin (IL)-4 stimulates IgE production, the hypothesis that Th2-associated cell-mediated immunity participates in protection to reinfection was studied in a cohort of adolescent boys 12–18 months after chemotherapeutic cure in Upper Egypt. Initial Schistosoma haematobium prevalence was 51% and posttreatment incidence was 44%. Water contact was similar between putatively resistant and susceptible patients. Resistant persons had a 3.5- to 14-fold greater frequency of schistosome adult worm antigen (SWAP)-specific lymphocytes secreting IL-5 or IL-4 (by ELISPOT) and IL-5 or IL-4 production in peripheral blood lymphocyte culture supernatants (P

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