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Immunomodulatory impression of anti and pro-inflammatory cytokines in relation to humoral immunity in human scabies

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The chief manifestations of scabies are mediated through hypersensitivity-like reactions and immune responses which are so far not well understood and remain poorly characterized. The aim of this study is to investigate the role of inflammatory cytokines in relation to humoral immunity in patients with scabies. Serum levels of total IgE, specific IgG, IL-10, IL-6, INF- γ , and TNF- α were investigated in a cross-sectional study including 37 patients with manifestations suggestive of scabies and serologically positive for anti *Sarcoptes* IgG, in addition to 20 healthy controls. The median value of total IgE was 209 (range, 17-1219 IU/mL), reflecting its wide range within our cases. IL-10 showed significant higher levels (28.7 ± 13.9) in infected cases than in controls (17.4 ± 11.32). A positive correlation was reported between total IgE and severity of manifestations ($r=0.429$, $P<0.005$). A significant positive correlation was observed between total IgE and both IgG and IL-6. On the contrary, a negative correlation was recorded between IL-6 and TNF- α which makes us, suggested anti-inflammatory rather than pro-inflammatory effect of IL-6 in the current study. Moreover, a negative correlation was noticed between the anti-inflammatory cytokine IL-10 and severity of manifestations, specific IgG, total IgE and INF- γ . Therefore, the current study theorized a regulatory role of IL-10 in inflammatory responses of scabietic patients, suggesting further future analysis of its therapeutic potential.

Biography

Amany Ahmed Abd El Aal has completed her MD degree in Medical Parasitology from Faculty of Medicine, Cairo University in collaboration with NAMRU-3 (Navy American Military Research Unit-3), Abbasia, Cairo, from 1990 to 1995. She is a Professor since 2006 and currently working in Medical Parasitology Department as well as Army Forces of College of Medicine (AFCM). She is a Member of scientific committee responsible for promotion of professor & assistant professor working in the field of Medical Parasitology in Egyptian universities. She has published more than 45 papers, about 20 of them in international journals.

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