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Titel des Beitrags: Altered, but not diminished specific T cell response in chronic mucocutaneous candidiasis patients.

Abstract: Patients suffering from chronic mucocutaneous infections with the yeast Candida albicans (CMC) are discussed to have an underlying primary cellular immunodeficiency. In order to characterise cellular immunity in CMC patients, we analysed chemotaxis and myeloperoxidase (MPO) releases of neutrophils and T cell proliferation and cytokine production to Candida albicans. Patients with chronic mucocutaneous candidiasis (n = 4) and healthy volunteers of same sex and similar age (n = 14) were enrolled into the study. Neutrophil chemotaxis was assessed by transwell migration assay, and MPO release by ELISA. T cell proliferation capacity was investigated by thymidine incorporation and cytokine secretion in supernatants by ELISA. Neither neutrophil migration nor MPO release differed between CMC patients and healthy controls. The relative lymphocyte stimulation index (SI Candida/SI PHA) was heterogenous, but overall it was higher in CMC patients compared to controls. However, Candida-specific IFN-gamma production was significantly reduced in CMC patients. Notably, Candida-specific T cell IL-10 production was markedly higher in CMC patients. The inability to clear the yeast Candida albicans in our CMC patients does not seem to be due to an impaired neutrophil function or reduced antigen specific proliferation of lymphocytes. In fact,
our patients tended to proliferate stronger to Candida antigen relative to PHA than healthy controls. However, the impaired Th1 cytokine production with an enhanced IL-10 production could play an important role in the pathogenesis of chronic mucocutaneous Candida infections.