Abstract

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CD8 CD28 null cells and HCMV in the pathogenesis of Systemic Sclerosis (SSc)

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Abstract

Systemic sclerosis (SSc) is a chronic inflammatory connective tissue disease, characterized by vascular dysfunction, immune alteration, and tissue fibrosis. Several studies involving both humans and animal models point towards a role for T cells in the pathogenesis of SSc, however, the precise phenotype, function, and specificity of pathogenic T cells remain elusive. Moreover, several studies reported increased frequencies of a T cell subset, known as CD4+/CD8+CD28null T cells, in peripheral blood in various autoimmune diseases or chronic inflammatory disorders or infectious diseases such as HCMV infection. Such CD4+/CD8+CD28null T cells are highly differentiated T cells lacking the co-stimulatory molecule CD28; such cells acquire expression of other receptors commonly associated with natural killer cells and display proinflammatory, cytotoxic and apoptosis-resistant features. In contrast to CD28null T cells, regulatory T cell subset is critical for maintaining immune tolerance and has also been described to assist in the tissue repair process. The aims of my project are to investigate CD4+/CD8+CD28null and CD57+CD4+/CD8+CD28null T cell subsets in peripheral blood of patients with SSc, by evaluating frequencies, phenotype, function and clinical relevance of these cells. Along with CD28null T cells, regulatory T cells were also investigated. Furthermore, we checked whether Iloprost (a Prostacyclin analog, commonly used in SSc treatment) may have any effect in the modulation of the percentage of these T cell subsets.

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Biography

Jadav Gnaneshwer is a Ph.D. Student at the University of Verona. In Ph.D his research topic is the role of HCMV in the pathogenesis of Systemic Sclerosis.

