EVENT ABSTRACT

Back to Event

Ultrastructure of human autologous macrophage lymphocyte rosettes in Chagas disease

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The processing and antigen presentation are involved in human macrophage lymphocyte rosette (MLR) and in this phenomenon of multiple immune synapse (IS) the autologous antigens of senescent neutrophils are presented by endocitic way like phagocytosis of cells undergoing apoptosis naturally in the body. In Chagas disease cardiomyopathy T. cruzi is the etiologic agent but also autoimmune phenomena have been described and observed an increment in occurrence of this phenomenon and CD4 PAS-positive lymphocytes producing IFN gamma are involved. Material and methods: healthy human blood samples, anticoagulated with heparin (n = 10) and chagasic samples (n=6) (Blood Bank, UNC) Autologous cultures in TC199 medium (SIGMA, St. Louis, MO). Samples: 48, 72, 96 and 120 h. MLR technique. PAS technique. Samples of MLRs underwent electron microscopy. Results: MLRs of chagasic patients involved more lymphocytes. Significant differences were observed between PAS positive lymphocytes from MLRs ($p < 0.01$). In Chagas cultures were observed plasma cells and neutrophils up to 48 h. Ultrastructure: redistribution of mitochondria in lymphocytes of MLRs, to the IS area. We observed multivesicular, multilamellar and tubular structures in spatial organization of MIIC along time culture in macrophages. In lymphocytes were observed differences in arrangement of chromatin between healthy individuals and Chagas patients as in previous works. Is noted that in cytoplasm were observed double-membrane vesicles to a greater extent in Chagas patients, we postulate costimulator B7 molecules carriers and we are preparing further studies to immunostaining. In all cases observed exosomes, IS and MLR phenomenon greater degree in chagasic patients cultures.

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