Conference presentation

EFFECT OF BIOTHERAPICS MADE FROM MOUSE SERUM OR RABBIT SERUM IN *Trypanosoma cruzi* INFECTION.

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The use of biotherapies as an intervention in experimental models of infection is a possible means to understand the effects of these medications [1-3]. This study evaluated the immunological and parasitological effects of biotherapies that were prepared from mouse or rabbit serum uninfected (MUI or RUI groups) or chronically infected with *T. cruzi* (MI or RI groups), dynamization 13CH. Male Swiss mice, 28 days of age were infected with *T. cruzi*-Y strain and treated with the different biotherapies diluted in water (1mL/100mL). The study was approved by the Ethics Committee for Experiments in Animals-UEM (protocol no. 080/2012). Using biotherapies made with mouse serum, MUI group exhibited good outcome with a pronounced Th1 response that was attributable to a reduction of IL-4 concentrations and decrease in IL-17 concentrations compared with the control group. However, this cytokine balance was not sufficient to promote decreased parasitemia in treated animals, likely because of a decrease in IFN- γ , thus hindering a more effective beneficial Th1 response. In contrast, the MI group presented a pronounced Th2 response that was attributable to increase in IL-4 and decrease in IFN- γ concentration compared to control group. MI group exhibited the worst outcome where the cytokine balance suppressed the immune response to *T. cruzi* in murine infection, resulting in a significant increased parasitemia and decreased survival time. Using biotherapies made with rabbit serum, RUI group exhibited the best outcome, including decreased parasitemia, with pronounced Th1 response that was attributable to decrease in IL-4 concentrations, with no changes in TNF- α and IFN- γ , associated to decrease in IL-17 compared to control group. In contrast, RI group did not exhibit alterations in parasitemia but a pronounced Th2 response that was attributable to increase in IL-4 concentration, with no changes in TNF- α and IFN- γ , associated to decrease in IL-17 compared to control group. Results show that biotherapies that were prepared from mouse or rabbit serum uninfected or chronically infected with *T. cruzi* differentially modulate the immune system in mice infected with this protozoan. Also, results provide evidence that biotherapies prepared with serum from healthy animal performed better than one made with serum from infected animal. In the same way biotherapies prepared with serum from resistant specie performed better than one made with serum from susceptible specie.

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