Conference Presentation

In vitro study of homeopathic medicines in macrophages co-cultured with Leishmania (L.) amazonensis

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Abstract

Background: In previous studies the effect of homeopathic medicines in murine cutaneous Leishmaniasis were described, indicating immunomodulation. The phagocytes migration and their activity increased after Thymulin 5cH and decreased after Antimonium crudum 30cH treatment.

Methods: The morpho-functional features of RAW macrophages co-cultured with Leishmania (L.) amazonensis in RPMI medium were analyzed in vitro, after 24h treatment with 20% of Thymulin 5cH, 6cH and 7cH or Antimonium crudum 6cH, 30cH and 200cH. All assays were performed in blind and in three series of quadruplicate. The spreading was analyzed by the breadth and area of each macrophage, photographed in a NIKON Eclipse 200-Coolpix system and measured by Metamorph® Image analysis software. The phagocytosis was analyzed by the percentage of amastigotes incorporated into the phagocyte vacuoles. ANOVA and Tuckey Krammer were used as statistical methods.

Results: A marked increase of macrophage spreading (considering breadth and area) was seen in Thymulin 5cH and Thymulin 7cH treated cells (p≤0.01), as in Antimonium crudum 30cH (p=0.05) and 200cH (p=0.001) treated cells. Only Antimonium crudum 200cH presented increase in phagocytosis index (p=0.001).

Conclusions: The in vitro assay corroborates the findings obtained from in vivo studies and represents the first step to a deeper understanding of the mechanism of action.

Keywords: Homeopathy, Antimonium crudum, Thymulin, RAW macrophages, in vitro assay, Leishmania (L) amazonensis.

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