Highly diluted medication reduces tissue parasitism and inflammation in mice infected with Trypanosoma cruzi

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Abstract

Background: The search for new therapeutic approaches with fewer side effects and better treatment efficacy to the Chagas Disease has been a major challenge.

Aim: To evaluate the effects of Kalium causticum, Conium maculatum, and Lycopodium clavatum 13cH in mice inoculated with the Y strain of Trypanosoma cruzi.

Materials and methods: In a blind, controlled, randomized study, 102 male Swiss mice, eight weeks old, were inoculated with 1,400 trypomastigotes of the Y strain of T. cruzi and distributed into the following groups: CI (treated with 7% hydroalcoholic solution), Ca (treated with Kalium causticum 13cH), Co (treated with Conium maculatum 13cH), and Ly (treated with Lycopodium clavatum 13cH). The medicines were selected by three homeopaths using Lince Expert System Software (Albuquerque, NM, USA), considering the behavioral characteristics of the mice. The treatments were performed 48 hours before and 48, 96, and 144 hours after infection [1]. The following parameters were evaluated: infectivity, prepatent period, parasitemia peak, total parasitemia, tissue tropism, inflammatory infiltrate, and survival.

Results: The prepatent period was greater in the Ly group than in the CI group (p = 0.02). The number of trypomastigotes on the 8th day after infection was lower in the Ca group than in the CI group (p < 0.05). Total parasitemia was significantly lower in the Ca, Co, and Ly groups than in the CI group. On the 12th day after infection, the Ca, Co, and Ly groups had fewer nests of amastigotes and amastigotes/nest in the heart than the CI group (p < 0.05) (Figure-I). A decrease in the number of nests and amastigotes in the intestine were observed in the Ly group compared with the CI group (p < 0.05). In the liver (day 12), Ly significantly prevented the formation of inflammatory foci compared with the other groups. In muscle, Co and Ly decreased the formation of inflammatory foci compared with CI (p < 0.05). Ly afforded greater animal survival compared with CI, Ca, and Co (p < 0.05). The animals in the Co group died prematurely compared with the CI group (p = 0.031). (Figure-II)
**Conclusion:** All of the experimental homeopathic medications with 13cH dynamization studied herein reduced the parasite peak and total parasitemia. Ly had significantly more benefits in the treatment of mice infected with *T. cruzi*, reducing the number of blood parasites, amastigotes nests in tissue and the number of amastigotes per nest, resulting in the increasing animal survival. The data may contribute to changes in management strategies in individuals with Chagas disease.

**Figure – I:** Amastigote nests in the heart in male Swiss mice, 8 weeks old, inoculated with 1,400 blood trypomastigotes of the Y strain of *T. cruzi* and treated with 7% hydroalcoholic solution (CI group) and the constitutional medications *Kalium causticum* 13cH (Ca group), *Conium maculatum* 13cH (Co group), and *Lycopodium clavatum* 13cH (Ly group).

**Figure – II:** Analysis of survival in male Swiss mice infected with 1,400 blood trypomastigotes of Y strain of *T. cruzi* and treated with 7% hydroalcoholic solution (CI group) and the homeopathic medications *Kalium causticum* 13cH (Ca group), *Conium maculatum* 13cH (Co group), and *Lycopodium clavatum* 13cH (Ly group).

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References


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