

## Chag11. Evaluation of results of association of the *T.cruzi* chemotherapeutic Benznidazole with others drugs (Nifurtimox, Cetoconazole) in the treatment of the experimental Chagas disease

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**Introduction:** Treatment of Chagas disease, determined by infection with *Trypanosoma cruzi* has been a challenge due to the different susceptibility of the parasite strains, characterized into different biological types or Biodemes. It has been shown that the Benznidazole (BZ) is the drug of choice for the treatment in humans but the results are irregular in patients of different endemic areas. Experimental data have shown a high resistance of the strains of Biodeme type III (*T. cruzi* I), and irregular results in the treatment of infections with Type II strains (*T. cruzi* II). The same results were obtained in the treatment with Nifurtimox (NF), in respect to the resistance of different strains. Other drugs in clinical use for different diseases have been assayed experimentally as the case of the Cetoconazole (Ceto). Probably the association of different drugs could improve the results of treatment in humans. Combinations of drugs may shorten the period of treatment and diminish the collateral toxic effects. **Objective:** To evaluate the effect of treatment with binary combinations of BZ with NF and of BZ with Ceto on the evolution of infection with the Y strain of *T. cruzi* (Biodeme Type I – Z2b). **Material and Methods:** Swiss mice inoculated with the Y strain ( $5 \times 10^4$  trypomastigotes blood forms) were divided into two experimental groups: G1 (Association of BZ+NF) and G2 (Association of BZ+ CETO). G1: I – Infected, untreated; II – Infected, treated with BZ (100mg/kg/day); III – infected and treated with NF (50mg/kg/day) - Infected and treated with Benz + NF. G2: I - infected, untreated; II – Infected, treated with BZ (100mg/kg/day); III – infected and treated with CETO (120mg/kg/day); IV – infected, treated BZ+ CETO. Cure tests: Parasitaemia after use of Cyclophosphamide, xenodiagnosis and hemoculture. **Results:** G1 – 100% mortality in the untreated controls until the 12<sup>nd</sup> day of infection; Groups treated with BENZ and BENZ + NF – 94.7% of survival and with NF: 100% of survival. Cure rates were of 94% for the mice treated with BZ and for the treated with the combination of BENZ + NF. G2 - Survival for the groups treated with BENZ and BENZ + CETO was of 100%. Cure testes: 100% of negativation for the treated with BENZ, 94, 73% and with CETO and 100% for those treated with BENZ + CETO. **Conclusion:** The present study did not indicate a significant difference between the treatment with Benznidazole as compared with the association with Nifurtimox or Cetoconazole. **E-mail:** marcioalmeida14@hotmail.com