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CONGENITAL TRANSMISSION OF *Trypanosoma cruzi* (TcIII) IN THE CHRONIC PHASE IN AN EXPERIMENTAL MODEL

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Abstract

Trypanosoma cruzi, the etiological agent of Chagas disease, is primarily transmitted by triatomines. However, vertical transmission is epidemiologically significant as it can occur in both the acute and chronic phases of the infection. The chronic phase is characterized by a positive conventional serology and subpatent parasitemia. The aim of this study was to detect vertical transmission in the offspring of Swiss mice (*Mus musculus*) females in the chronic phase of *T. cruzi* infection. In this way, seven females mice (8 weeks old) were infected with 1×10^4 blood trypomastigotes of the KK (TcIII) isolate of *T. cruzi* and after 35 days, they were mated with healthy male breeders in a harem system (one male to two females) for seven days. The animal's ´parasitemia was monitored by direct examination using the Pizzi-Brener technique on blood samples from the females for 35 days, and in the offspring, it was observed until adulthood (60 days). Parasitemia was detected in 100% of females (7/7) from the fourth to the thirteenth day post-infection (DPI), and became subpatent after the fourteenth DPI. All females produced an average of 8.4 (59 in total) offspring per female. Of these, vertical transmission was detected in 1.69% (1/59) of the offspring. The parasitemia of this pup persisted until adulthood (52 days), with a peak parasitemia of 1,060 parasites/5µL on the 22nd day of life. These data suggest the ability of vertical transmission of *T. cruzi* (TcIII) by females in the chronic phase of the infection, emphasizing the need for early diagnosis in pregnant women and newborn.

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