

unknown and second, because the parasite is extraordinarily resistant to cold, since it has been proved to survive beyond the maximum storage period of blood and its vitality has been demonstrated in plasma after freezing.

The diagnosis of carriers of the chronic form of the disease can be made through a variation of the complement-fixation test, the Machado-Guerreiro reaction, made with antigen from parasite cultures. In the first investigations made on donors to the Blood Bank of the Hospital das Clinicas, this reaction was positive in 2.7 %. In endemic zones of the hinterland of the country the positive results in candidates for donation attained 20 %, showing that blood transfusion may be a dangerous vehicle of dissemination of the illness.

At the beginning of these investigations, 16 patients who had received blood from donors with positive Machado-Guerreiro reaction were followed; the transmission of the disease was demonstrated in four, of which only one showed symptoms of the acute phase of the disease. In three, the infection was proved by finding the parasites in the circulating blood and by the positive Machado-Guerreiro reaction, even though the acute manifestations of the disease were lacking.

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## Clinical and Laboratory Studies on Six Cases of American Trypanozomiasis (Chagas Disease) Transmitted by Blood Transfusion

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### *Abstract*

Six cases of American Trypanozomiasis transmitted by blood transfusion are studied. In two of them the disease was manifested as an acute infection similar to those acquired by natural way with the exception of incubation time which was 30 and 37 days instead of 4 to 10 in the natural infection. Another patient showed cardiac manifestations two months after the blood transfusion. Three other receptors infected through blood transfusion did not show any symptoms which might be attributed to the acute stage of Chagas disease. The transfusional transmission of the diseases was proved by direct finding of the trypanozomes in blood smears in three cases and through xenodiagnosis in five cases. The complement-fixation test (Machado-Guerreiro reaction) was positive in all cases but one where the test remained negative during six years in spite of the presence of parasites in the circulating blood.