

SOME CONSIDERATIONS ON THE IMPORTANCE OF THE DISCOVERY OF CHAGAS' DISEASE

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Fifty years after my father's death I wish to present some aspects of his work which have an important significance to my country's development.

Chagas' discovery and description of the disease which bears his name produced undoubtedly an important impact in Brazil on the whole field of our biomedical research, on our tropical and preventive medicine and in our Public Health Services. I would like to argue this assertion by bringing to attention some arguments which I believe may demonstrate it. Before doing it however I would like to discourse over the scientific/medical situation prevailing in our country at the time of discovery and to give a short account of Chagas' discovery.

Medical research had reached in our country, when Chagas entered Medical School, a level of progress that had put our medical milieu in a quite appreciable focus, and in advance of all other fields of scientific research, despite of the efforts made by Pedro II, our second Emperor, a ruler with a rather vivid interest for the sciences. This statement can be corroborated by the various medical books published by Brazilian physicians, and by statements made by visitors as for instance by the mission from the Pasteur Institute, which came, headed by Emile Marchoux, just at the end of the century to study yellow-fever, a permanent and very grave menace to our social development. The growth of Medicine in Brazil can easily be understood when one considers that the challenge the colonists had to face was to overcome the diseases in order to protect themselves and the slave labour they introduced in the country. Physicians or surgeons in our wards or clinical laboratories knew at the time the gist of medical knowledge and in their great majority had a common preoccupation: to study the pathogenesis of yellow-fever and find its causative agents.

It was in the middle of a complete curriculum renovation that my father became a medical student in Rio de Janeiro. He came from a small farm held by his widowed mother in the central state of Minas Gerais. The Medical School had been reformed, and pathology had been introduced in the medical curriculum. Classical medical teaching – the bed approach, the physical examination – were beginning to be complemented by blood tests, etc. At the same time, autopsies were performed, with certainly, great difficulties. Chagas stayed the whole day, and voluntarily many nights, at the hospital and acquired for a young medical student, a rather extensive medical and pathologic knowledge with the help of one of his teachers, Miguel Couto, who afterwards by his prestige became the patron of clinical Medicine in Brazil.

Couto used to undertake personally the post-mortem examination of his patients and gradually enrolled Chagas in his task, an admirable route to observe the mysteries of the aggression of disease against the human body, and the best support to understand clinical symptoms. Chagas ran from the wards to the morgue, but found still time to teach a practical course on malaria, in order to complement the monthly allowance he received from his widowed mother's farm.

But in the field of medical progress a great event had changed the face of our medical world. This was the eradication of yellow-fever from our littoral by Oswaldo Cruz. Trained at the Pasteur Institute in France, Cruz, having accepted the theory for Finlay, was able to eliminate the *Aedes aegypti* from our oceanic cities. His success took him to the endeavour to establish an Institute for medical research, the Institute which has his name. At the same time he established new lines for Public Health Services.

His feats, his extraordinary personality attracted towards him and to the new Institute a group of the most gifted medical students of the country. It was thus natural that Chagas should address himself to Oswaldo Cruz, when the time came, to prepare his thesis. The subject Chagas chose was Malaria, and the brochure published in 1903, under the title "Estudos Hematológicos no Impaludismo", reads still well today.

In spite of the invitation of Oswaldo Cruz to stay at the Institute and to integrate his staff, Chagas, his work finished, took an appointment at a hospital for plague patients internment, and opened a private consultation room. This for a short period. After conducting a successful campaign against malaria in São Paulo, Chagas could not resist the tempting invitation of Oswaldo Cruz and was appointed definitely to the staff of the Institute.

As when he entered Medical School, Chagas found at the Institute the challenging scientific milieu he needed to further his capabilities. The Oswaldo Cruz Institute proffered to him a variety of scientific pathways whose transmission would be of great significance for the discovery of the American Trypanosomiasis.

Together with his Brazilian colleagues, most of which were older than him, Chagas found in the Institute eminent foreign scientists, whose company would give him the complete scientific maturity he needed. They were Hartmann, a parasitologist with whom Chagas worked in close collaboration, Prowazek, Dürke and Giemsa, all pathologists. Three years after his appointment Chagas was commissioned to undertake a campaign against malaria in the hinterlands of our country. The Republican Government had inherited from the Monarchy a project designed to establish a railroad which would cross the country: a land communication between Rio de Janeiro and the northern city of Belém do Pará in the mouth of the Amazon River. After attaining a rather short distance from the São Francisco River, in the northern part of