About the Etiological Treatment of Chagas Disease

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We read with interest the guidelines published by Andrade et al. on the diagnosis and treatment of Chagas Disease[1]. We enjoy that initiative due to the need to develop guidelines that allow an adequate approach to this zoonosis, which still continues affecting millions of people throughout Latin America[2].

However, based on the recent progress on the pathophysiology of Chagas disease and the biology of Trypanosoma cruzi, we would like to point out, that several drugs that have been proposed as alternatives for its etiological management. This phenomenon has emerged as the product of evidence that suggest the presence of this parasite in the chronic phase, which justifies the use of anti-Chagas disease drugs not only in the acute phase. Thus, various groups of drugs (for example, sterol biosynthesis inhibitors, inhibitors of cysteine proteases, pyrophosphate metabolism inhibitors, inhibitors of purines, trypanothione metabolism inhibitors) have been studied. Some of them proved to be potentially future therapeutic tools, given the evidence that supports their trypanocidal activity both *in vitro* and *in vivo*. In addition to that, there is a huge advantage of having shown few side effects compared to currently used anti-Chagas disease drugs and, in many cases, better pharmacokinetic and pharmacodynamic properties[2,3].

Therefore, regarding the need for new effective, safe and easily accessible drugs for the etiological handling of the Chagas disease, there is a myriad of possibilities which, in the light of current evidence, promises new therapies against this public health problem. It would have been interesting that those potentialities were commented, including evidence that such new drugs has appeared so far, especially because it has been published and there are ongoing studies in different Latin American countries employing these drugs in the etiological treatment of Chagas Disease[2].

Keywords

Chagas disease/epidemiology; Chagas disease/therapy.

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Reply

The World Health Organization and the Pan American Health Organization recommended the etiological treatment in countries with high prevalence of Chagas disease. A public health policy in some South American countries prescribe the treatment of patients with the indeterminate form of the disease in its chronic phase, especially for children and young patients. Treatment in the late chronic phase aims to reduce parasitemia, prevent progression of visceral lesions and interrupt the chain of transmission.

The results of observational studies and randomized studies in children suggest benefit in preventing the emergence of Chagas heart disease, although there are no randomized studies that demonstrate reduction of outcomes in adult patients with the indeterminate or chronic form of the disease. In addition to these clinical data, other arguments

in favor of the treatment consist of experimental evidence that demonstrated a reduction in the progression of Chagas heart disease, the same occurring with observational studies in humans, and the occurrence of minor side effects only.

Thank you for emphasizing the need to describe the etiological treatment, although the therapeutic alternatives available for clinical use are still quite unsatisfactory. We recognize the potential of the drugs suggested by the correspondents and await the results of the BENEFIT study, a multicenter, randomized, double-blind, controlled study that will evaluate, for six years, more than 2,850 patients with chronic Chagas disease treated with benznidazole or placebo for about two months.

Sincerely,

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