

Long-Term Outcomes of Treating Nonacute Chagas Disease with Benznidazole

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The full report is titled “Long-Term Cardiac Outcomes of Treating Chronic Chagas Disease with Benznidazole versus No Treatment. A Nonrandomized Trial.” It is in the 16 May 2006 issue of *Annals of Internal Medicine* (volume 144, pages 724-734). The authors are R. Viotti, C. Vigliano, B. Lococo, G. Bertocchi, M. Petti, M.G. Alvarez, M. Postan, and A. Armenti.

What is the problem and what is known about it so far?

Chagas disease is an infection with the parasite *Trypanosoma cruzi*. The infection can involve the heart muscle and can lead to irreversible heart problems, including abnormal heart rhythms, heart failure, and even sudden death. The disease is seen mostly in South and Central America and in Mexico where “kissing bugs” (also called reduviid or triatomine bugs) spread the parasite. People become infected by coming into contact with the feces of infected kissing bugs, by spreading the infection from mother to child during pregnancy, or by receiving blood transfusions or organ transplants from an infected person.

Many people get Chagas disease as children. There are 3 stages of Chagas disease: acute, indeterminate, and chronic. The acute stage is early infection. Fever, fatigue, rash, and enlarged liver, spleen, and lymph nodes can occur in this stage, but these symptoms usually are not severe and often resolve even without treatment. After the acute stage, the indeterminate stage can last many years with the person still having the infection in their blood but no symptoms. Chronic disease occurs in up to one third of people with Chagas disease. In this stage, symptoms of heart or gastrointestinal tract problems develop 10 years or more after the initial infection. Treatment involves drugs, such as benznidazole, that kill the parasite. Treatment is effective during acute-stage Chagas disease, but its effectiveness during nonacute disease (indeterminate and chronic stages) is uncertain.

Why did the researchers do this particular study?

To see whether benznidazole treatment for people with nonacute Chagas disease improved health outcomes.

Who was studied?

566 adult patients with indeterminate- or chronic-stage Chagas disease and no heart failure.

How was the study done?

The researchers assigned alternate patients who presented to their Chagas disease clinic in Buenos Aires, Argentina, to receive benznidazole at 5 mg per day by mouth for 30 days or no treatment. They then followed patients to see who developed worsening disease with new heart problems. They also did blood tests to see whether patients' blood became negative for Chagas disease.

What did the researchers find?

Treated patients were less likely to develop worsening disease, such as new heart problems, than were untreated patients. Blood tests were also more likely to become negative in treated patients than in untreated patients.

What were the limitations of the study?

Patients and their doctors knew whether the patient was taking benznidazole. In addition, 20% of patients did not complete all follow-up visits. Healthier people in the no treatment group were most likely to drop out of the study, which could make treatment seem more effective than it actually is. For these reasons, this study suggests but does not prove that benznidazole is effective for nonacute Chagas disease.

What are the implications of the study?

This study suggests that benznidazole treatment is associated with better outcomes for patients with nonacute Chagas disease. A good-quality randomized trial is needed to confirm the benefit of treatment of such patients.

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