

Chagas Screening in People with HIV

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Disclaimer

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Case

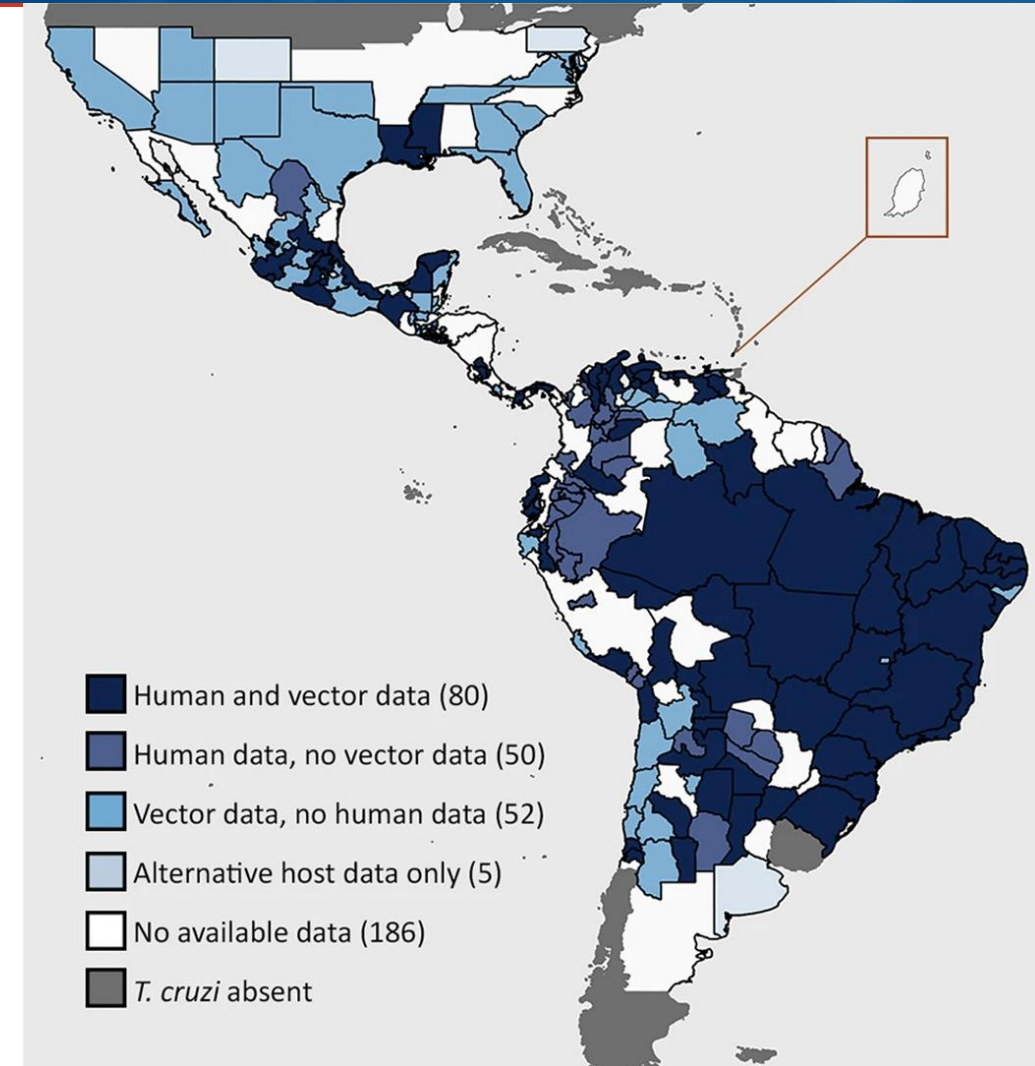
- 36 year old man with new diagnosis of HIV. Immigrated to US from Mexico 1 year ago. His CD4 count is 150. Denies any comorbidities and denies any symptoms.
- Would you screen him for Chagas disease?

Chagas in People with HIV: Outline

- Epidemiology
- Clinical Manifestations
- Screening Recommendations
- Preventing Disease

Chagas Epidemiology

- Caused by parasite *Trypanosoma cruzi*
- Estimated that ~10 million people have Chagas disease
- Endemic in most of Latin America – although complicated as there are multiple routes of transmission, vector species, and diverse reservoir species
- People in poor, rural areas most at risk
- Autochthonous cases have been reported in US – in Louisiana and Texas



Source: <https://www.cdc.gov/chagas/about/index.html>

<https://clinicalinfo.hiv.gov/en/guidelines/hiv-clinical-guidelines-adult-and-adolescent-opportunistic-infections/chagas-disease>

Brown AJ et al. Nature Sci Data 2017

Chagas Transmission

- Primary mode of transmission is through feces of triatomine “kissing” bugs contaminating bite wounds
 - May also be transmitted congenitally, blood transfusion, organ donation
 - Oral transmission is how wild animals are infected (ingestion of infected triatomines)
 - Contaminated food causing transmission to humans is a risk as well



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Chagas: Clinical Manifestations

Acute Phase: Trypomastigotes circulating in blood; usually not diagnosed in this phase as it is usually a non-specific febrile illness. Lasts 60-90 days after exposure.

Chronic Phase: usually asymptomatic

- ~20-30% of individuals with chronic phase will develop clinical disease
- Cardiomyopathy most common manifestation; digestive disease
- Reactivation disease can occur in the setting of immunosuppression (including HIV) and are associated with higher levels of parasitemia
 - Meningoencephalitis most common
 - Acute myocarditis



Romaña's sign

Chagas: Screening

Screening is recommended for all individuals who have lived in Mexico, Central, or South America for greater than 6 months

- Prioritize screening women of reproductive age, either prenatally or during routine care
- Persons born to a mother with confirmed *T. cruzi* infection
- Persons with evidence of a bite or other exposure to a triatomine bug in Latin America or regions of United States with known enzootic cycles
- Living organ donors with any of the above epidemiologic risk factors
- ***Prioritize individuals who have any of the epidemiologic risk factors above and are at risk for significant immunocompromise, including transplant candidates/recipients or people with HIV***

Goal of screening:

- Identify people with asymptomatic chronic infection or occult disease
- Offer counseling regarding transmission
- Consider treatment for prevention – more effective when given closer to initial infection; also treatment prior to pregnancy to avoid perinatal transmission

Chagas: Screening

- T cruzi IgG testing – positive results should be confirmed with a different serologic test (i.e. based on a different antigen); PCR is not useful for screening (but helpful for diagnosis if clinical suspicion)

Chagas: Preventing Disease

- Counsel patients who are visiting endemic areas to avoid sleeping outdoors or buildings constructed of adobe brick/mud/thatch
- In US, all blood and organ donors are screened for disease

Preventing disease from latent infection

If screening test is positive and confirmed – offer single course of benznidazole or nifurtimox if no prior treatment and no evidence of significant cardiomyopathy

- Benznidazole is favored as first line due to better tolerability – access to med is only through one company and requires use of their program
- Both contraindicated in pregnancy

Chagas Screening: Controversies

Does everyone from Latin America need Chagas screening?

? Priorize women of childbearing age

Chagas Screening: Summary

- Screening is recommended for all individuals who have lived in Mexico, Central, or South America for greater than 6 months **(BIII)**
- If screening test positive and confirmed, treat with benznidazole or nifurtimox

Questions?

Acknowledgment

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