

Serologic prevalence of Chagas 'disease among Latinamerican blood donors in Spain.

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BACKGROUND

- Population movements from Chagas disease-endemic areas to non-endemic countries due to immigration make the occurrence of this disease in these latter areas possible Chagas disease can be transmitted by the hemoderivatives donation.
- To prevent this transmission during blood transfusion Spanish legislation compels to the screening all those donors from endemic areas

OBJETIVOS

- The aim of this study is describe the results of Chagas disease screening program in a group of donors from endemic areas between the years 2006-2014.

METHODS

- 1487 samples from donors from Latin America present in the blood bank of the Transfusion Comunitarian Centre from Asturias, Spain (Centro Comunitario de Transfusiones de Asturias, España) among June 2006-June 2015 were studied.

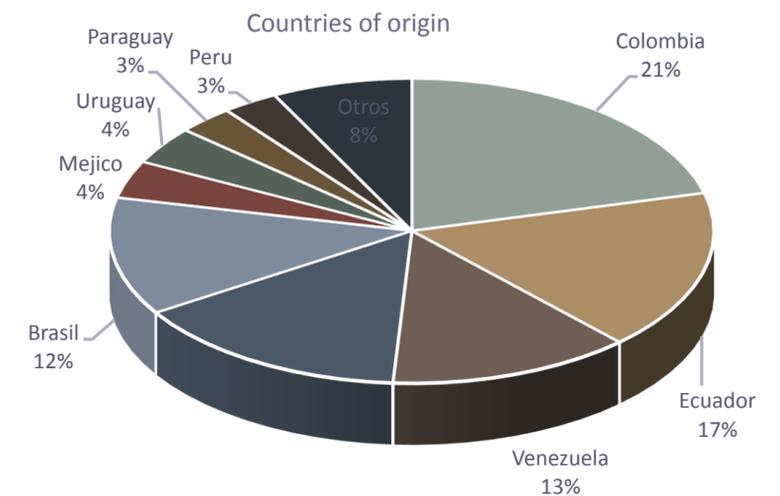
METHODS

- Sex, age, country of origin and previous diagnostic of Chagas disease data were collected from each donor. Stick Chagas (Operon S.A. (Zaragoza) Spain) antibody test (inmunocromatography) was used as a screening assay.
- All positive samples were sent to the Centro Nacional de Microbiología (Instituto Carlos III, Spain) to confirm the result by determination of anti-T. cruzi antibodies by a second ELISA (Ortho Clinical Diagnostics), indirect immunofluorescent antibody test (IFAT) and polymerase chain reaction (PCR).

RESULTS

- During the period of study 1486 donors (64% were women, average age of 36 [8] were analyzed.
- Only 24 donors come from Bolivia. In any case data from previous Chagas disease were collected.
- Five positive cases were detected (0.33% of prevalence) which came from Bolivia (3 cases) and Brazil (two cases).
- Twelve patients from Venezuela, Argentina, Colombia (3 cases each), Ecuador (2 cases) and the Dominican Republic (1 case) had false positive screening technique, The false positive rate was significantly higher in donors from Venezuela (p = 0.008, OR 5 [1-20]). In three cases the tests showed a discordant result.

RESULTS



The country prevalence was 12.5% for Bolivia (p = 0.00001, OR 90 [11-816]) and 1.08% for Brazil (p = 0.06, OR 4.67 [0.54-34,4])

CONCLUSIONES

- The prevalence of Chagas disease in donors from endemic areas is low but increases significantly in those from Bolivia and Brazil.
- Given the risk of transmission is needed systematic screening especially in these populations