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Results of systematic screening programme for strongyloidiasis in immigrant population

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Background: Strongyloidiasis remains an important health problem. The aims of this descriptive study were: i) to study the seroprevalence of chronic strongyloidiasis in immigrant population; ii) to identify geographic areas of greatest risk of infection in order to optimize screening programs.

Material/methods: Between 2008-2015 we conducted a prospective screening program of chronic strongyloidiasis in all immigrants patients attending in a Tropical Medicine Unit. Patients were classified the patients in these 7 geographical areas according their origin .Three formalin-ether concentrated stool samples, and enzyme-linked immunosorbent assay for serum anti-*S. stercoralis* antibodies were used as screening.

Results: We screened 968 patients (52.8% women, mean age 34[12], mean time in Spain 1358[1813] days) The areas of origin were Central (33.4%) west (27.3%), North (4.5%), and East (1,3%) Africa; 28,8% come from South America and 3,1% from Central America. 121 patients (12,5%) were positive for *S. stercoralis* . The infection was significantly more frequent in women ($p=0.001$; OR 1.964[1.314-2.935]) but we didn't find differences in age or time in Spain. The prevalence of infection in the different areas was 38.4% in East Africa , 16% in Central Africa, 13.2% in South America, 8.7% in West Africa, 6% in Central America 4.5% in North Africa. Univariate analysis showed that infection by *S. stercoralis* was significantly more frequent in patients from Central ($p=0.012$; OR 1.60[1.087-2.361] and East Africa ($p<0.016$; OR 4.52[1.454-14.05]). For the contrary the risk of infection was significantly lower in West Africa ($p\text{-value}=0.017$, OR 0.590 [0.366-0.952]) and North Africa ($p = 0.070$; OR 0.322 [0.077-1.348]) without significant differences in the other zones. Eleven patients had a HIV coinfection and two a HTLV infection without differences

Conclusions: This study reports the sero prevalence and risk of chronic strongyloidiasis among a group of immigrants from developing countries. It is therefore not possible to extrapolate the results to determine the exact prevalence of intestinal parasite infections in either of the communities. However, the findings suggest a high likelihood of chronic strongyloidiasis in East African patients.. Given the persistent nature of infection and the mortality associated with the hyperinfection syndrome, we recommend that immigrant patients from developing countries be routinely screened for *S. stercoralis*, especially those from East Africa. Serology is a highly appropriate screening tool.