25th ECCMID
Copenhagen, Denmark
25 – 28 April 2015
ESCMID EUROPEAN SOCIETY OF CLINICAL MICROBIOLOGY AND INFECTIOUS DISEASES

ME01
Screening and prophylaxis of migrants

Rogelio López-Vélez. *MD, PhD, DTM&H, Asoc. Proff.*

National Referral Unit for Tropical Diseases
Infectious Diseases Department. Ramón y Cajal University Hospital. Madrid, Spain

SALUD ENTRE CULTURAS
Hospital Universitario Ramón y Cajal
SaludMadrid
Comunidad de Madrid
instituto ramón y cajal de investigación sanitaria irycis

Screening of Imported Infectious Diseases among Immigrants: A Public Health Challenge

Rogelio López-Vélez

Migrants coming from developing countries are mostly young healthy individuals. However, they have been described as carrying significant infectious disease burdens, determined by geographic origin, ethnicity, health conditions at the departure point, and the migratory route.

They can suffer infections, which have a worldwide distribution (such as HIV infection or tuberculosis) or tropical infectious diseases characteristic of their areas of origin (such as Chagas diseases), which may confer a higher mortality caused by infectious diseases compared with the native population.

Many of these infections may be asymptomatic for long periods of time.

Mobile populations may modify the epidemiology of certain infectious diseases in the World as they can introduce new infections that in the presence of a viable vector could produce outbreaks in the host country or reintroduce previously eradicated infections. In other cases the incidence of certain globally distributed infections may be modified as incidence may increase in the host countries despite autochthonous cases declining.

The control of these infections may reduce the incidence and prevalence of many of them and modify their outcome. Therefore, identifying and treating imported infectious diseases, among asymptomatic patients may have an important impact both for the individual concerned and for public health.

The objective of this presentation are to describe the prevalence of infectious diseases in asymptomatic immigrants and to propose a systematic screening protocol for asymptomatic immigrants based on area of origin (sub-Saharan Africa and Latin America).

- **Should we screen migrants from malarial endemic areas?**
  - is there any rationale?
  - when?
  - treatment of positive cases?
  - how to protect migrants from malaria?

- **Should we screen Latino-american migrants for Chagas disease?**
  - which provenance countries?
  - when (entry screening, pregnancy, bood/organ donors)?
  - which laboratory test is advised for screening?
  - treatment of positive cases?

- **Should we screen migrants for other parasitic infections?**
  - which infections?
    - Strongyloidosis?
    - Schistosomiasis?
    - Cysticercosis?
    - Other?
  - when?
  - which laboratory test is advised for screening?
  - treatment of positive cases

Proposed systematic screening of infectious diseases in asymptomatic immigrants based on origin

Begoña Monge-Maillo, Rogelio López-Vélez, Francesca F. Norman, Federico FerrereGonzález, Ángela Martínez-Pérez, and José Antonio Pérez-Molina. Screening of Imported Infectious Diseases Among Asymptomatic Sub-Saharan African and Latin American Immigrants: A Public Health Challenge. **Am J Trop Med Hyg. *2015***

Sub-Saharan African immigrants	Latin American immigrants
Blood count; serum biochemistry; basic urine analysis	Blood count; serum biochemistry; basic urine analysis
HIV serology	HIV serology
HBV serology	HBV serology
HCV serology	HCV serology only if risk factors
Syphilis serology	Syphilis serology
TST if <5 years since migration	TST if <5 years since migration
Stool analysis for ova and parasites if <6–12 months since migration or eosinophilia	Stool analysis for ova and parasites if <6–12 months since migration or eosinophilia
PCR for malaria if <3 years since migration	T. cruzi serology
Strongyloides serology	Strongyloides serology

HIV = human immunodeficiency virus; HBV = hepatitis B virus; HCV = hepatitis C virus; TST = Tuberculin Skin Test; PCR = polymerase chain reaction.

- **Tropical Diseases Screening in Immigrant Patients with Human Immunodeficiency Virus?**
- Latent tropical infections can reactivate because of immunosuppression.
  - intestinal parasites: Cryptosporidium, Cystoisospora?
  - Strongyloidiasis?
  - Malaria?
  - Chagas disease?
  - Leishmaniasis?
  - Schistosomiasis?
  - Histoplasmosis?

Tropical Diseases Screening in Immigrant Patients with Human Immunodeficiency Virus Infection in Spain. Am. J. Trop. Med. Hyg., 88(6), 2013, pp. 1196–1202

Prospective observational study of all human immunodeficiency virus (HIV)–infected immigrants who visited the Infectious Diseases Department of the Hospital Universitari Vall d'Hebron, Barcelona, Spain, during June 2010–May 2011

A total of 190 patients were included: 141 (74.2%) from Latin America, 41 (21.6%) from sub-Saharan Africa, and 8 (4.2%) from northern Africa

Infectious diseases screening, Spain*

Characteristic	Overall	Latin America	Sub-Saharan Africa	Northern Africa	P†
Eosinophilia	29/190 (15.3)	15/141 (10.6)	13/41 (31.7)	1/8 (12.5)	0.001
Latent tuberculosis infection	12/179 (6.7)	9/135 (6.6)	3/37 (8.1)	0/7 (0)	0.760
Positive for *Toxoplasma gondii* serology	103/190 (54.2)	73/141 (52.5)	27/41 (65.9)	2/8 (25)	0.129
Positive for antibody against HCV	9/190 (4.7)	2/141 (1.4)	5/41 (12.2)	2/8 (25)	0.002
Positive for HBs	15/190 (7.9)	9/141 (6.4)	6/41 (14.6)	0/8 (0)	0.091
Past hepatitis B infection	68/190 (35.8)	44/141 (31.2)	22/41 (53.7)	2/8 (25)	0.008
Past or present HBV infection	83/190 (43.7)	53/141 (37.6)	28/41 (68.3)	2/8 (25)	< 0.001
Intestinal parasitosis	37/139 (26.6)	32/102 (31.4)	4/32 (12.5)	1/5 (20)	0.036
Positive for *Leishmania infantum* serology	7/187 (3.7)	6/138 (4.3)	1/41 (2.4)	0/8 (0)	0.580
Positive for *Strongyloides stercoralis* serology	35/190 (18.4)	22/141 (15.6)	11/41 (26.8)	2/8 (25)	0.101
Positive for *Trypanosoma cruzi* serology	5/126 (3.9)	5/126 (3.9)	0/0 (0)	0/0 (0)	–
Positive for *Schistosoma mansoni* serology	11/58 (18.9)	2/17 (11.8)	9/41 (22)	0/0 (0)	0.368
Positive PCR result for *Plasmodium*	1/62 (1.6)	0/21 (0)	1/41 (2.4)	0/0 (0)	1.000
Any parasitologic diagnosis	70/190 (36.8)	52/141 (36.9)	16/41 (39)	2/8 (25)	0.803

*Values are number (%) of patients. HCV= hepatitis C virus; HBs = hepatitis B surface antigen; HBV = hepatitis B virus; PCR, polymerase chain reaction.
†For comparison between Latin America and sub-Saharan groups.