



## 6. CONCLUSIONES

*No pido otra cosa: el cielo sobre mí y el camino bajo mis pies*

Robert Louis Stevenson

### **1. Perfil del viajero español en una Unidad de Medicina del Viaje**

Varón o mujer en torno a los 32 años de edad, que viaja como turista a un país en desarrollo tropical o subtropical por primera vez y consulta por iniciativa propia tras enfermar durante el viaje o a su regreso.

### **2. Valoración de las medidas de prevención en los viajeros que enferman**

Los viajeros españoles que enferman incumplen principalmente las actitudes preventivas ante los diversos riesgos epidemiológicos asociados a los viajes.

El incumplimiento de la quimioprofilaxis antipalúdica es el principal factor relacionado con la adquisición del paludismo en estos viajeros.

La inmunización inadecuada previa al viaje es la situación menos frecuente en el viajero español que enferma.

### **3. Las enfermedades de los viajeros en una Unidad de Referencia**

#### **3.1. Los problemas de salud de los viajeros**

Las enfermedades diarreicas son el principal problema de salud de los viajeros intercontinentales españoles en una Unidad de Referencia de Medicina del Viaje, seguidas por las enfermedades febriles (encabezadas por el paludismo, a las que les siguen el dengue, las rickettsiosis, las hepatitis virales y el absceso hepático amebiano), las enfermedades cutáneas, las enfermedades respiratorias, una miscelánea de problemas de medicina interna (muchas veces no relacionados con los viajes), las enfermedades infecciosas cosmopolitas y, por último, las enfermedades de transmisión sexual.

#### **3.2. Principales enfermedades y sus características**

-*Diarrea del viajero*: patología habitualmente bacteriana, cosmopolita pero con mayor riesgo en viajes al subcontinente indio y el Sudeste de Asia. La fiebre en esta patología indica la existencia de gérmenes de mayor gravedad.

-*Paludismo*: principal causa de fiebre, con alta incidencia en los viajes al África subsahariana en los que no se cumple adecuadamente con la quimioprofilaxis antipalúdica.

-*Enfermedades cutáneas*: patología frecuentemente importada relacionada con viajes de corta duración a América y África. La principal causa de consulta es la larva *migrans* cutánea, seguida de la escabiosis, las piodermis, la tungiosis, la miasis, las micosis, las urticarias, la *miliaria rubra* y la leishmaniosis.

-*Filariosis*: infecciones relacionadas con viajes de larga duración al Africa subsahariana, predominando la loaosis, seguida de la mansonelosis y la onchocercosis.

-*Infecciones respiratorias*: patrón epidemiológico semejante al observado en los pacientes que no viajan.

-*Hepatitis virales*: cuadros principalmente debidos al virus de la hepatitis A, con presencia menos frecuente de otros virus hepatotropos.

-*Rickettsiosis*: la fiebre botonosa es la causa más frecuente y se relaciona con el turismo cinegético a los países del cono sur africano. A la anterior, le sigue la fiebre Q que se comporta como una enfermedad febril cosmopolita.

-*Dengue*: enfermedad febril relacionada con viajes al subcontinente indio, Sudeste de Asia, América Central y El Caribe con frecuentes complicaciones post-infecciosas.

-*Schistosomosis*: parasitosis relacionada con los baños o el vadeo de agua dulce infectada del Africa subsahariana, principalmente durante viajes al País Dogón, principal atracción turística de Malí.

-*Absceso hepático amebiano*: causa más frecuente de amoebosis extraintestinal, asociada con mayor frecuencia a los viajes al Sudeste de Asia y el subcontinente indio.

#### **4. Estrategia básica de atención médica a los viajeros intercontinentales**

Dado que más de un tercio de la patología observada es importada y poco familiar para la mayoría de los clínicos españoles los viajeros enfermos deben recibir una atención especializada.

Sobre la base de los datos epidemiológicos y los hallazgos de la exploración física se decidirán las pruebas complementarias a solicitar. No obstante, está por definir la costo-efectividad de estas actuaciones.

El estudio sistemático de los viajeros asintomáticos para descartar la presencia de enfermedades importadas no parece justificado. En nuestra experiencia sólo en una de cada diez personas en esta situación se demostró patología adquirida durante el viaje.



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## 8. APÉNDICES

**Tabla A1. Riesgo relativo de enfermedades transmisibles para el viajero a países en desarrollo\***

Alto <sup>1</sup>	Moderado <sup>2</sup>	Bajo <sup>3</sup>	Muy bajo <sup>4</sup>	
Diarrea del viajero	Dengue	Amoebosis	Actinomycosis	Histoplasmosis
Infecciones respiratorias (vías aéreas altas)	ETS (gonorrea/chlamydia)	Ascariidiosis	Anisakiosis	Infección VIH/SIDA
	Enteroviriosis	Chancroide	Anthrax	Legionelosis
	Giardiosis	Enterobiosis	Blastomycosis	Leishmaniosis
	Hepatitis A	Escabiosis	Chikungunya	Paludismo (sin profilaxis)
	Herpes simple	Fiebre tifoidea	Clonorchiosis	Paragonimosis
	Paludismo (sin profilaxis)	Hepatitis B y C	Coccidiomycosis	Peste
	Salmonelosis	Leptospirosis	Criptosporidiosis	Pinta
	Shigelosis	Parotiditis	Difteria	Psitacosis
		Poliomielitis	Enfermedad de Chagas	Rabia
		Sarampión	Echinococcosis	Schistosomosis
		Sífilis	Fiebre amarilla	Tifus
		Sprue tropical	Fiebre botonosa	Tos ferina
		Strongyloidosis	Fiebre Congo Crime	Toxocariosis
		Trichuriasis	Fiebre Ebola-Marburg	Trepanomatosis
		Tuberculosis	Fiebre Q	Trichinellosis
		Varicela	Fiebre recurrente	Trypanosomosis
			Gnathostomosis	

\*Orden alfabético

1. más de un caso por cada 10 viajeros
2. más de un caso por cada 200 viajeros pero menos de un caso por cada 10 viajeros
3. más de un caso por cada 1.000 viajeros pero menos de un caso por cada 200 viajeros
4. menos de un caso por cada 1.000 viajeros

VIH: virus de la inmunodeficiencia humana; SIDA: síndrome de la inmunodeficiencia adquirida

**Tabla A2. Período de incubación de las enfermedades asociadas al viajero.**

Corto (< 1 semana)	Intermedio (1-4 semanas)	Largo (1-6 meses)	Muy Largo (2meses-1 año)
Anthrax	Amoebosis	Ascariidosis	Cisticercosis
Chancro sifilítico	Brucelosis	Blastomicosis	Echinococcosis
Chikungunya	Enfermedad de Chagas	Hepatitis B	Filariosis
Chlamydiosis	Enfermedad de Lyme	Hepatitis C (postransfusión)	Leishmaniosis visceral
Dengue	Fiebres hemorrágicas con síndrome renal	Hepatitis D	Lepra
Diarrea aguda bacteriana	Fiebre de Katayama (Schistosomosis)	Leishmaniosis cutánea	Otros tremátodos
Fiebre amarilla	Fiebre Q	Loaosis	Schistosomosis
Fiebre botonosa	Fiebre tifoidea	Melioidosis	Tripanosomiasis africana
Fiebre del Congo-Crimea	Fiebre de Lassa	Paludismo	( <i>T. brucei gambiense</i> )
Fiebre del Ebola-Marburg	Giardiosis	Rabia	VIH/SIDA
Fiebre recurrente	Hepatitis A	<i>Sprue</i> Tropical	
<i>Gastroenteritis Viral</i>	<i>Hepatitis E</i>	<i>Taeniasis</i>	
Gonorrea	Leptospirosis	Tracoma	
Herpes genital	Linfogranuloma venéreo	Trepanomatosis endémica	
Histoplasmosis	Paludismo	Trichuriasis	
Legionelosis	Strongyloidosis		
Peste	Trypanosomosis africana		
Psitacosis	( <i>Trypanosoma brucei rhodesiense</i> )		
Salmonelosis	Tifus epidémico		
Tétanos	Tifus exantemático		
Trypanosomiasis (chancro)	Tifus murino		
Venenos alimentarios			

*VIH: virus de la inmunodeficiencia humana*

SIDA: síndrome de la inmunodeficiencia adquirida

**Tabla B. Quimioprofilaxis del paludismo en viajeros a áreas endémicas**

<i>Fármaco*</i>	<i>Dosis de adulto**</i>	<i>Indicaciones***</i>	<i>Comentarios</i>
<b>Mefloquina</b>	250mg vía oral a la semana	Africa subsahariana, América del Sur, Asia y Oceanía	De elección en todas las áreas de resistencia a la cloroquina Contraindicado en: hipersensibilidad a la mefloquina, emba- razo <sup>1</sup> , epilepsia, enfermedad psiquiátrica y niños < 15Kg
<b>Cloroquina</b>	300mg base vía oral a la semana	América Central, México, Caribe, norte de Africa y Oriente Medio	Recomendado para áreas donde predomina el <i>Plasmodium vivax</i> y las cepas sensibles a la cloroquina de <i>P. falciparum</i>
<b>Cloroquina más proguanil</b>	300mg base a la semana más 200mg al día vía oral	Áreas con <i>P. falciparum</i> resistente a cloroquina (no efectivo en algunas áreas de Africa del Oeste, Tailandia o Nueva Guinea)	Recomendado para áreas con bajo nivel de <i>P. falciparum</i> resistente a cloroquina y para viajeros a áreas con alto nivel de resistencia que no pueden tomar mefloquina o doxiciclina (intolerancia o embarazo)
<b>Doxiciclina</b>	100mg vía oral al día	Áreas fronterizas de Tailandia con Myanmar y Camboya	Recomendado a viajeros a áreas de múltiple resistencia a antipalúdicos y a áreas con <i>P. falciparum</i> altamente resistente que no pueden tomar mefloquina. Contraindicado en embarazadas y niños menores de 8 años

\*En estudio: Primaquina, Atovaquona-Proguanil (*Malarone*) y Azitromicina

\*\*Dosis en niños: Mefloquina: 5mg/Kg semanal; Cloroquina 5mg/Kg semanal; Proguanil 3mg/Kg /día; Doxiciclina: 1,5mg/Kg /día

\*\*\*Para detalles geográficos ver: *International Travel and Health. Vaccination Requirements and Health Advice*. Geneva, Switzerland, World Health Organization, 2000 ó Centers for Disease Control and Prevention: *Health Information for International Travel*. Atlanta, US Department of Health and Human Services Publication, 2000.

<sup>1</sup>Aprobado su uso en embarazadas por las autoridades sanitarias estadounidenses (FDA). Estudios no concluyentes

**Tabla C. Vacunas efectivas en la prevención de las enfermedades asociadas al viajero**

<i>Vacuna</i>	<i>Pauta inicial</i>	<i>Dosis de recuerdo</i>	<i>Comentarios</i>
<b>Fiebre amarilla</b> (viva atenuada)* **	1 dosis (0,5ml) sc en mayores de 6 meses	Cada 10 años	Validez del Certificado Internacional de vacunación al 10º día de la primovacunación o el mismo día si revacunación
<b>Cólera</b> (viva CVD 103HgR)	1 dosis vo en mayores de 2 años	Cada 6-12 meses	No protege contra el <i>Vibrio cholerae 0139</i>
<b>Cólera</b> (inactiva WC-BS)	2 dosis vo días 0 y 7 en mayores de 2 años	Cada 6-12 meses	Sinérgica con vacuna fiebre tifoidea oral viva (Ty21a)
<b>Hepatitis A</b> (inactiva) <sup>1+</sup>	2 dosis 1440 U (1ml) im deltoides meses 0 y 12	Cada 10 años	Eficaz a las 2-4 semanas de la primera dosis e inmediatamente tras la segunda
<b>Hepatitis A</b> (inactiva) <sup>2+</sup>	2 dosis (1ml) im deltoides meses 0 y 12	Cada 10 años	Vacuna compatible con la anterior
<b>Fiebre tifoidea</b> (viva atenuada) <sup>3**</sup>	3 dosis vo días 0, 2 y 4	Cada 5 años	Eficaz al séptimo día de la última dosis. No administrar con antibióticos, antipalúdicos o vacuna de la polio oral
<b>Fiebre tifoidea</b> (polisacárido) <sup>4</sup>	1 dosis (0,5ml) im	Cada 2-3 años	Eficaz a los 7-10 días de la primovacunación
<b>Meningocócica</b> (inactiva)	1 dosis (1ml) sc A+C ó A+C+Y+W-135	Cada 3-5 años (2-3 a. en < 4 años.)	Efectiva a los 15 días de primovacunación No recomendada en menores de 2 años
<b>Rabia</b> (inactiva RVA) <sup>5</sup>	3 dosis (1ml) im deltoide días 0, 7 y 21 ó 28	Cada 2-3 años	Comprobar anticuerpos séricos tras 3ª dosis Precisa dosis de recuerdo si existe exposición al virus
<b>Rabia</b> (inactiva HDCV) <sup>6</sup>	3 dosis (0,1ml) id días 0, 7 y 21 ó 28	Cada 2 años	No administrar cloroquina o mefloquina hasta tres semanas de la última dosis de vacuna. Igual que la anterior.
<b>Encefalitis japonesa</b> (inactiva) <sup>7</sup>	2 ó 3 dosis (1ml) sc día 0, 7, 21	Recuerdo en 12-18m luego cada 4 años	Efectiva en 10-14 días de la primovacunación. Niños menores de 3 años reciben la mitad de dosis (0,5ml)
<b>Hepatitis B</b>	3 dosis (1ml) im deltoide	No determinado	Pauta acelerada: días 0, 7 y 21 (recuerdo a los 18 meses)

(inactiva) <sup>8</sup>	meses 0, 1-4 y 6-18		Pauta rápida: meses 0, 1 y 2 (recuerdo a los 10 meses)
<b>Difteria-Tétanos</b> (inactiva)	2 dosis (Td ó TT) im meses 0 y 1	Recuerdo en 6-12m luego cada 10 años	En niños menores de 6 años utilizar DTP Efectiva tras la segunda dosis
<b>Poliomielitis</b> (inactiva)	2 dosis sc ó im en meses 0 y 1-2	Recuerdo en 6-12m	Recomendada como inmunización primaria en adultos Las dosis de recuerdo pueden ser parenterales u orales
<b>Poliomielitis</b> (viva atenuada)**	1 dosis única vo previa al viaje	No determinado	Los niños menores de 6 años deben de recibir 4 dosis No tomar con antibióticos o mefloquina
<b>Sarampión</b> (viva)**	1 dosis única im previa al viaje	Posible recuerdo a los 6-12m	Puede administrarse en mayores de 9 meses como parte de la vacuna de la triple vírica. Efectiva a los 10 días.
<b>Encefalitis por garrapata<sup>9</sup></b>	3 dosis im días 0, 7, y 21	Recuerdo al año	Pauta estándar FSME-Immun: meses 0, 1-3 y 10-15 recuerdo a los 3 años
<b>Gripe</b> (inactiva)	1 dosis única im	Cada año	Recomendada en mayores de 65 años y/o enfermedad de base. Dar dosis una semana previa al viaje
<b>Peste</b> (inactiva)	3 dosis (1ml) im meses 0, 1 y 4-7	Recuerdo a los 6 y 12m luego cada 1-2a	Frecuentes efectos secundarios que aumentan en severidad con las revacunaciones

vo: vía oral; im: intramuscular; sc: subcutánea; id: intradérmica; a: años; m: meses

<sup>1</sup>Havrix 1440 U/ml <sup>2</sup>VAQTA 50 U/ml <sup>3</sup>Ty21a (Vivotif) <sup>4</sup>Polisacárido capsular (Typhim Vi)

<sup>5</sup>Vacuna de virus absorbente <sup>6</sup>Vacuna de células diploides humanas

<sup>7</sup>Engerix-B y Recombivax HB (recombinante) <sup>8</sup>JE-Vax <sup>9</sup>Encepur(K)

\*Contraindicada en viajeros con alergia o historia de anafilaxis al huevo o algunos de sus componentes

\*\*Contraindicada en viajeros con alguna de las siguientes condiciones: embarazo, leucemia, linfoma, neoplasia diseminada o inmunodepresión causada por infección VIH, quimioterapia o radioterapia

†Inmunoglobulina G preformada: 1 dosis (100U/ml) im produce inmediata protección durante 4-6 meses. Compatible con vacunación

**Tabla D. Destino anual de los viajes internacionales desde España en los años noventa**

<i>Destino</i>	<i>1990</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>	<i>1998</i>	<i>1999</i>
África del Norte	254.078	228.413	323.318	331.084	257.844	234.043	241.687	276.868	300.520	259.985
África del Oeste	5.225	4.646	6.287	5.142	5.758	16.434	20.218	11.185	18.581	21.729
África Central	692	133	NC	633	1.004	207	1.195	472	1.059	1.115
África del Este	5.002	13.711	11.073	15.954	6.644	15.142	9.155	16.861	16.203	16.204
África del Sur	4.812	4.778	4.312	3.683	5.075	6.769	10.096	12.577	15.305	15.775
América del Norte	267.170	316.246	371.622	336.695	304.697	334.283	362.222	361.724	361.705	404.060
América Central	27.386	32.230	40.204	45.861	58.040	62.669	60.307	64.328	66.904	71.528
Caribe	37.005	45.006	56.162	60.468	69.590	97.826	217.132	230.044	256.317	287.398
América del Sur	151.694	159.298	173.121	174.495	209.397	261.362	252.001	244.075	201.286	191.205
Oriente Medio	49.311	56.295	94.341	35.178	27.366	40.749	40.109	61.048	61.796	122.427
Subcontinente indio	31.331	24.128	42.789	33.371	35.024	39.775	44.454	44.164	43.349	33.279
Asia Oriental	44.325	53.442	57.863	47.288	49.053	53.508	55.945	59.223	64.631	74.122
Sudeste de Asia	56.495	52.345	55,049	69.044	64.152	62.173	64.045	57.555	57.805	57.214
Región del Pacífico	6.586	6.225	7.903	8.548	10.533	11.350	11.827	13.993	16.351	18.863
Europa	9.872.235	10.695.354	10.633.564	10.081.125	11.851.596	11.504.415	10.556.506	11.239.183	12.110.888	10.054.539
<b>Total</b>	<b>10.813.347</b>	<b>11.694.241</b>	<b>11.822.614</b>	<b>11.248.569</b>	<b>12.955.773</b>	<b>12.740.705</b>	<b>11.946.899</b>	<b>12.693.300</b>	<b>13.592.700</b>	<b>11.629.443</b>

NC: no consta el dato

Departamento de Estadística  
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## **ENFERMEDADES INFECCIOSAS IMPORTADAS POR VIAJEROS INTERCONTINENTALES ESPAÑOLES. EXPERIENCIA DE UN DÉCADA EN UNA UNIDAD DE MEDICINA TROPICAL.**

Los viajes internacionales han sido identificados por la Organización Mundial de la Salud como una de las seis principales causas del resurgir de las enfermedades infecciosas en el mundo. En esta coyuntura, tanto en nuestro país como en el resto de los países desarrollados, la patología infecciosa importada desde otras regiones del planeta por todo tipo de viajeros constituye un importante problema de Salud Pública.

Este trabajo proporciona una visión holística de los problemas de salud y las características epidemiológicas de los viajeros intercontinentales españoles a través del estudio de 1399 casos clínicos observados a lo largo de diez años en un centro de referencia nacional para las enfermedades importadas como es la Unidad de Medicina Tropical y Parasitología Clínica del Hospital Ramón y Cajal.

Así, se ha objetivado que el perfil del viajero español que consulta a una unidad especializada es el de un varón ó una mujer alrededor de los 32 años de edad, que viaja como turista por primera vez a un país en desarrollo (sub)tropical y consulta por iniciativa propia tras enfermar durante el viaje o a su regreso.

Los viajeros que enferman incumplen principalmente las actitudes preventivas generales y la quimioprofilaxis antipalúdica y, en menor medida, las inmunizaciones frente a las enfermedades relacionadas con el viaje.

Las enfermedades infecciosas importadas con mayor frecuencia son las diarreicas seguidas del paludismo, las enfermedades cutáneas tropicales, las filariosis, las hepatitis virales, las rickettsiosis, las arboviriosis, la schistosomosis y el absceso hepático amebiano.

## **INFECTIOUS DISEASES IMPORTED BY INTERCONTINENTAL SPANISH TRAVELERS. A DECADE OF EXPERIENCE IN A TROPICAL MEDICINE UNIT.**

The World Health Organization has identified international travels as one of the six main causes that have led to the worldwide reappearance of infectious diseases. Having said that, in Spain and other developed countries, imported infectious diseases from different areas of the planet by travelers, constitute an emerging Public Health issue.

This study gives an holistic perspective of the health problems and epidemiological characteristics of Spanish intercontinental travelers through the analysis of 1399 clinical cases seen in a ten year period in a national reference center for imported diseases called Tropical Medicine and Clinical Parasitology Unit of the Ramón y Cajal Hospital.

Thus, it has been observed that the profile of the Spanish traveler that attends an specialized unit is either a male or female around 32 years old that travels as a tourist for the first time in his/her life to a developing (sub)tropical country and consults by his/her own initiative because he/she falls ill during the travel or at the return from it.

The travelers who fall sick mainly break the general preventive attitudes and the antimalarial chemoprophylaxis and to a lesser extent do not follow recommended immunizations.

The most common imported infectious diseases turned out to be as follows: traveler's diarrhoea, malaria, cutaneous tropical diseases, filariasis, viral hepatitis, rickettsioses, arboviral diseases, schistosomiasis and amoebic liver abscess.