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Burden of imported infectious diseases from 2007 to 2014: a portuguese hospital experience

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A vida é uma aprendizagem diária. Afasto-me do caos e sigo um simples pensamento: quanto mais simples, melhor!

José Saramago

À minha família e amigos.

BURDEN OF IMPORTED INFECTIOUS DISEASES FROM 2007 TO 2014: A PORTUGUESE HOSPITAL EXPERIENCE

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ABSTRACT

Background: International travel is increasing, mainly to underdeveloped continents. The traveler is a unique pawn in the importation and exportation of endemic diseases.

Methods: We analyzed 8 years of inpatient data with travel-related disease for demographics, travel characteristics and hospitalization outcome.

Results: 336 inpatients were included, 83% were men. Throughout the years, there was an increase of 27% per year of travel-related hospitalizations. African countries were the most common destinations, mainly for work-reasons. Expatriates were a major group, representing 41% of all inpatients, coming mainly from Angola. The main diagnoses were malaria, non-specified febrile syndrome, and dengue. Malaria (acquired in Africa in 97.1% of the cases) was the only with major impact on the need for intensive care, with an estimate of 9 times more need than the remaining. Age was a determining factor in hospitalization length (increases) and intensive care admission (odds ratio decreases). Four deaths occurred in patients with malaria.

Conclusions: Travel-related illnesses are increasing, and with it the need to anticipate and prepare the health system institutions for treatment of such diseases. Efforts should be made to improve the preventive care mainly of long term travelers and expatriates, given their prolonged exposition and higher risk.

Keywords: expatriate; travelers; travel medicine; malaria.

RESUMO

Introdução: A viagem internacional está em crescimento, particularmente para países em desenvolvimento. O viajante é um peão ímpar na disseminação de doenças.

Métodos: Neste trabalho foram analisados 8 anos de dados de internamentos de doentes adultos com patologia infeciosa de importação, sendo avaliada a evolução demográfica, clínica e resultado da hospitalização.

Resultados: Foram analisados um total de 336 internamentos, 83% do sexo masculino, com um aumento de 27%/ano. Os países Africanos que falam português foram os destinos mais comuns, maioritariamente por trabalho. Os expatriados representaram 41% dos internamentos. Os diagnósticos principais ao longo dos 8 anos foram malária, síndrome febril não especificado e dengue. A demora média foi de 9 dias . A malária (adquirida em África em 97.1% dos casos) teve impacto significativo no internamento em cuidados intensivos e foi responsável pelas 4 mortes registadas. A idade foi fator determinante no aumento da duração do internamento e na diminuição de admissão em cuidados intensivos.

Conclusões: É necessário antecipar e preparar as instituições de saúde para o tratamento destes doentes. e melhorar o acesso a consultas pré-viagem, particularmente em viajantes de longa estadia e expatriados, dada a sua exposição prolongada e maior risco.

Palavras-chave: expatriados; viajantes; medicina da viagem; malaria.

1. INTRODUCTION

International travel has become a major component of today's society. It is responsible for an impulse on the socioeconomic progress, job creation and business expansion, and it became one of the international sectors with more significant growth in the last 6 decades.[1, 2] Despite occasional shocks, tourism has shown virtually uninterrupted growth. International tourist arrivals have increased from 25 million globally in 1950, to 278 million in 1980, 527 million in 1995, and 1133 million in 2014. [1]. Long-distance travel has increased disproportionately to shorter courses, especially to countries in Asia and Africa whose economical development is rapidly rising.[3, 4]

There is a multitude of reasons to travel, such as vacations or professional purposes. In 2014, half of the registered travels were on holidays and recreation (53%), with 14% being work-related and 27% for diverse reasons, such as visiting friends and relatives, humanitarian help, and others. [1] Regardless of that, the burden of disease, mainly of infectious cause, associated with trips to countries with different ecosystems and biological threats from the origin country are not at all neglectable. This is even more important when considering that the journeys to impoverished countries have an increasing importance (in 2010 they represented around 50% of the total destinations). [5] Considering these facts, it is not surprising that now diseases spread with relative ease, even the ones that were once confined to a given region.[5]

In Portugal with the installation of the economic crisis, there was an increase in the movement of individuals for professional reasons, mainly to countries of the European Union (67% of the emigrations in 2014), but also to African countries who speak portuguese (ACSP). [6] For these reasons, a transformation is being noted in the observed diagnosis in health care, especially in the ones dedicated to diagnosis and treatment of infectious diseases.

The question we propose to explore is how crisis and globalization changed the demographic and the diagnosis of in-patients with a travel-related illness in an Infectious Diseases Department (IDD). In order to do so we studied the diagnosis during an 8 years period. IDD is integrated in the Centro Hospitalar de São João (CH-SJ), a national reference hospital, in Porto, that serves residents, tourists and migrants.

2. PATIENTS, MATERIALS AND METHODS

The patient's data whose admission was considered related to travel were selected from the hard copies and electronic records of the ward of IDD-CHSJ. The study was conducted during an 8 year period from January 2007 to December 2014.

The anonymity was assured through the exclusion of any identification elements.

The demographic records included: age; sex; birth country; residence country; history of the recent travel (length, reason and region); pre-travel medical appointment and prophylaxis, if applied; length of the hospital stay in days; inpatient complications; need of intensive care (ICU); disease outcome.

Patients should have a recent travel to or from continental Portugal, and the illness should be relatable to the trip. Only the final diagnosis was considered, and cases were included without definitive diagnosis, if the importation origin was evident.

Statistical treatment of data was done through SPSS software. Frequencies, descriptive and cross-tabulations procedures [7] were used in view of having a global characterization of inpatients and travel behaviors. Significance of patterns and trends were assessed through means and proportions comparison tests and linear regressions models [8, 9]

The main determinants of inpatients diagnosis, need of intensive care and length of stay were studied by using convenient regression models. A generalized linear model approach [10, 11] was used to fit a Logit model applied in the analysis of ICU (binary data), as well as to fit a Poisson regression applied in the analysis of the length of stay (count data). The analysis of determinants of inpatients diagnosis (categorical data) was based on a Multinomial Logistic Regression.

3. RESULTS

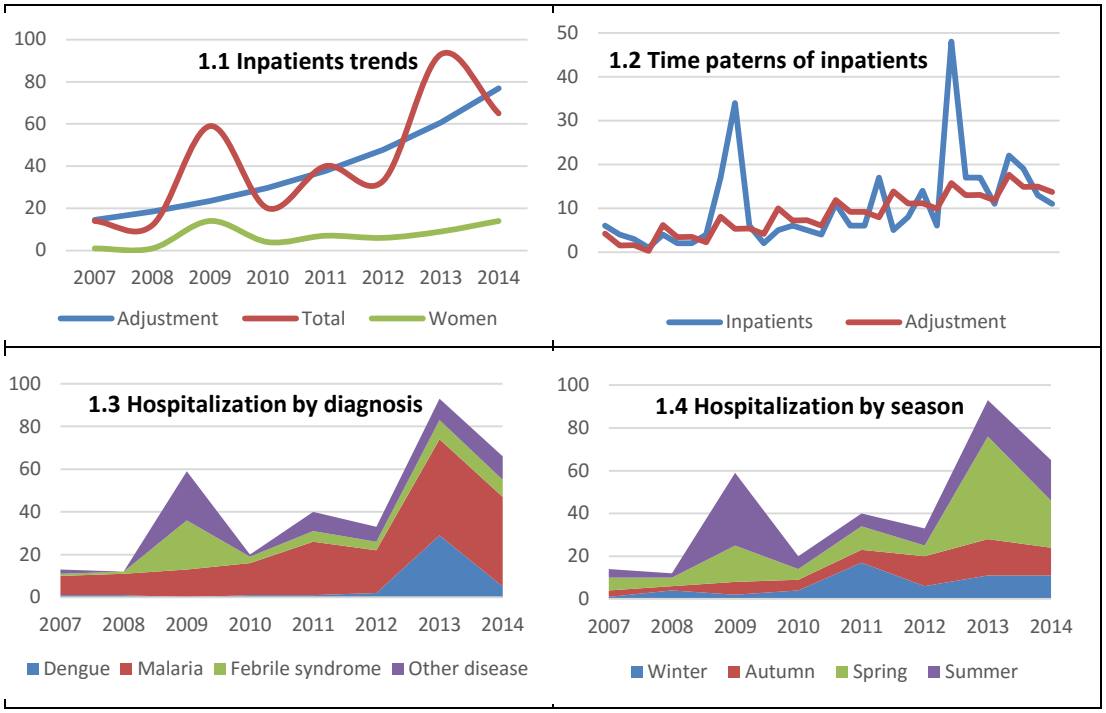
3.1. General characteristics of patients hospitalized between 2007 and 2014

From the 341 inpatients selected according to the inclusion criteria, 5 were excluded due to extensive missing data, 336 were included for analysis.

From the 336 inpatients, 280 were male (83%); differences based on gender were significant[1] and stable[2]. In the 8 year period of analysis, there was a sustained increase of registered cases (figure1.1), corresponding to an average growth rate of 27% per year[3]. In addition, two statistically significant[4] outbreaks were registered during the summer of 2009 and spring of 2013 (figures 1.2 and 1.4). The time series decomposition adjustment (Figure 1.2) reveals the absence of significant inpatient seasonality[5].

[1] t-statistic of 15.04 for the test of equal proportion between men and women, corresponding a p-value practically null.
[2] F-statistic of 2.003 for the hypothesis of polynomial trending, corresponding a p-value of 0.226.
[3] Based on an exponential trending regression with a F-statistic of 9.160, corresponding a p-value of 0.023
[4] An estimate of 30 additional inpatients were registered in 2009 and 2013 with a t-statistic of 9.746 and p-value practically null.
[5] F-statistic of 2.264 for the hypothesis of non-significant seasonality, corresponding a p-value practically null.

Figure 1 - Inpatients and hospitalization trends



The growth tendency of inpatients with imported disease (figure 1.3) is fundamentally associated with malaria, dengue fever (DF) and non-specified febrile syndrome (NSFS) diagnosis. The two peaks of 2009 and 2013 were associated with outbreaks of importation illnesses. In 2009, there was an important increase of NSFS (39% of patients), but also of influenza A infection (20.3%). In 2013, a significant incidence of malaria cases (43%), and DF (30.1%) was registered. In 2014, the number of inpatients was highly determined by malaria (63.1%).

Table 1 shows information of inpatients according to diagnosis, average age and hospital stay length and ICU cases. The most common diagnoses were malaria (51.9%), NSFS (16%) and DF (11.3%). The remaining illnesses (others, 20.8%) included influenza A infection, traveler's diarrhea, respiratory infection, among others.

The average age of inpatients sample was 41 years, being identical for the average age of the most frequent diseases. The diagnoses with higher average ages were other systemic viral infections (73 years), DF co-infected with HIV (59 years) and infectious arthropathy (55 years).

Among the diseases with the lowest average age are traveler's diarrhea (28 years) and typhoid fever (27 years).

Table 1 – Registered diagnosis in the period of January 2007 to December 2014

Diagnosis	Patients			Hospital		Deaths
	N	%	Age	Days	ICU	
Malaria	175	51.9	42	9	63	4
Non-specifed febrile syndrome	54	16.0	41	5	1	
Dengue fever	38	11.3	40	4		
Influenza A infection	12	3.6	40	3	1	
Traveler's diarrhea	10	3.0	28	8		
Respiratory infection	9	2.7	54	7	1	
Skin/subcutaneous infection	6	1.8	42	7		
Hepatic/Renal abscess	4	1.2	38	15		
Malaria & HIV coinfection	4	1.2	45	29	3	
Clear cerebrospinal fluid (CSF) meningitis	4	1.2	34	5		
HIV infection (new diagnosis)	4	1.2	49	15		
Other sexually transmited diseases	2	0.6	45	8		
Malaria & Dengue coinfection	2	0.6	37	6		
Chronic osteomyelitis	2	0.6	22	18		
Trypanosomiasis	2	0.6	42	28		
Infectious artropathy	1	0.3	55	3		
Dengue fever & HIV coinfection	1	0.3	59	14		
Chikungunya fever	1	0.3	41	4		
Typhoid fever	1	0.3	27	6		
Hepatitis A	1	0.3	35	6		
Other systemic viral infections	1	0.3	73	54		
Rubeola	1	0.3	49	3		
Measls	1	0.3	35	6		
Total	336	100	41	9	69	4

On average, inpatients had a hospital stay of 9 days. The most frequent diseases had an equal or shorter average stay: malaria (9 days), NSFS (5 days) and DF (4 days). Patients who had HIV co-infection had an increased length of stay to 29 for malaria and 14 days for DF. The diagnoses associated with longer hospital stays (and 4 or more cases) were other viral systemic infections (54 days) and Hepatic/Renal abscess (15 days). 20.5% of inpatients were admitted in the ICU (most with malaria). Four deaths were registered, all in patients with malaria (malaria fatality rate 2.2%).

Table 2 crosses most relevant residence countries with travel destinations. Destinations include countries from all continents, with a highlight to Portuguese-speaking African countries (50.7% of total destinations), namely Angola (38.5%).Portugal was the main residence country (47.9%), followed by Angola (33.3%).

Most inpatients were residents abroad: expatriates (41%) and 8% foreign travelers visiting Portugal (figure 2.3). Travelers with shorter stays (less than a month) represent 32% of inpatients; the travelers for periods of 1 to 6 months correspond to 14% and for longer periods (>6 months) 5% of cases.

Table 2 - Inpatients per country of residence and of travel destinations

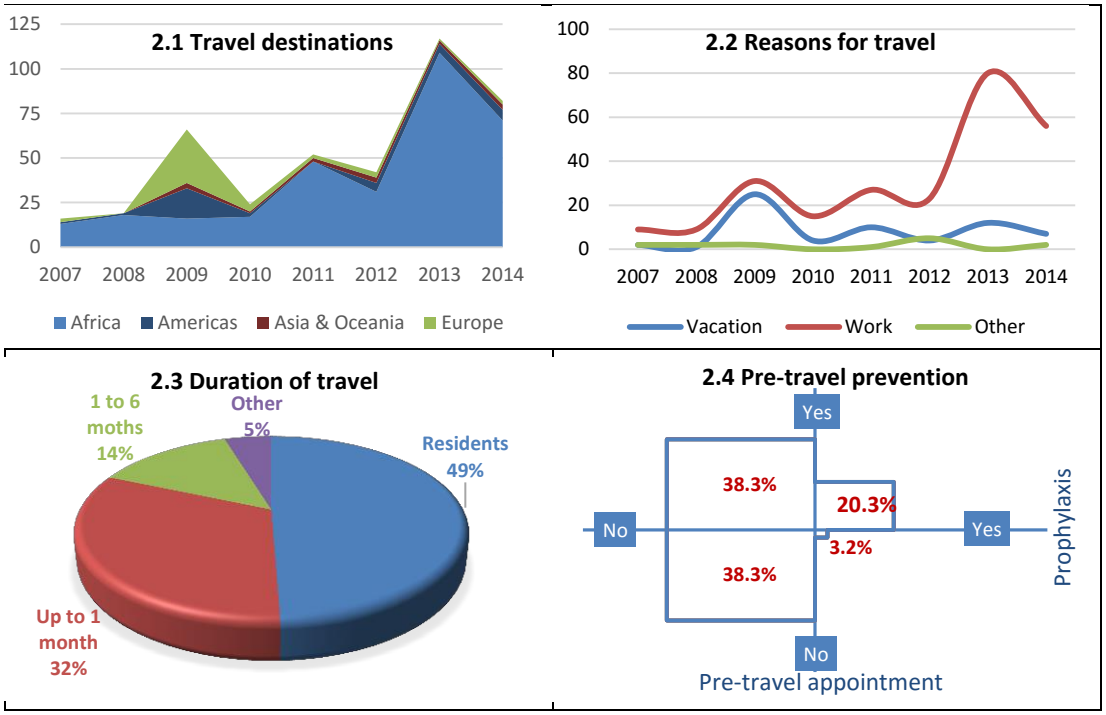
Residence country	Countries from/to the patient traveled										
	Angola	Brazil	Spain	USA	France	Guina	UK	Mozambique	Portugal	Others	Total
Angola	112										112
Brazil		5									5
Spain			4								4
USA				5							5
France			2		2					1	5
Guinea						5					5
UK			1				2			1	4
Mozambique								15			15
Portugal	62	11	16	1	2	4		14	1	50	161
Others				1	1					18	20
Total	174	16	23	7	5	9	2	29	1	70	336

Along the years, a trend growth of inpatients coming from Africa, and fundamentally from Angola, is visible with a peak on the year of 2013 (figure 2.1). In 2009 there was a peak of patients traveling in Europe, mainly from Spain.

Most travels were work-related (74.2%), and for holidays (19.3%) (figure 2.2). Throughout the period of analysis, the number of inpatients having travelled for work reasons was the one which grew the most. The outbreak registered in 2009 is associated with tourism and work related travels, the outbreak in 2013 is mainly associated with work-related trips.

As for pre-travel preventive care (figure 2.4), information was available in 222 from the 285 patients who should have had a pre-travel consultation. From these 222 travelers, 58.6% got a pre-travel medical appointment and 38.3% did not have medical advice.

Figure 2 - Inpatients travel patterns – tourism, work, others



3.2. Pattern and determinants of diagnosis and hospitalization

The explicative model of diagnosis aims to differentiate the behavior of the most frequent diseases: malaria, dengue fever and NSFS, comparing them to the remaining diagnoses (reference category). This analysis was performed in relation to the two most important epidemiologic factors: origin region and season. Factors such as age or sex revealed as non significant.

Table 3 - Multinomial Logistic Regressions of Diagnosis

Covariates		Chi-square likelihood ratio	Dengue fever		Malaria		NSFS	
			Significance	Odds ratio	Significance	Odds ratio	Significance	Odds ratio
Season	Spring	Statistic 201,811	0.042	1.875	0.000	3.812	0.451	0.750
	Summer		0.000	0.207	0.896	1.034	0.896	1.034
	Autumn	Significance 0,000	0.067	0.300	0.000	4.400	0.638	0.800
	Winter		0.069	0.143	0.000	6.286	0.372	0.571
Region	Angola	Statistic 310,654 Significance 0,000	0.074	1.750	0.000	7.437	0.715	0.875
	Guinea		-	0.000	0.050	8.000	-	0.000
	Mozambique		0.997	0.000	0.001	8.000	0.657	0.667
	Others Africa		0.997	0.000	0.001	7.667	0.484	1.667
	Brazil		0.410	0.625	0.080	0.250	0.080	0.250
	Others Americas		0.147	0.375	0.080	0.250	0.796	0.875
	Asia & Oceania		0.220	0.429	0.997	0.000	0.220	0.429
	Europe		0.007	0.063	0.007	0.063	0.413	1.313

According to the analysis, dengue and malaria differ significantly from all other diseases in both factors, the origin region and the season. NSFS behavior was not statistically different from the other diseases (reference category) when considering the season. In relation to the region of travel we may say that the only significant difference refers to Brazil, where, with 8% significance, it is less likely for a patient travelling from that destination to be a diagnosed with NSFS (4 times less likely).

Dengue occurred relatively more frequently in the spring, and less frequently in the other seasons (particularly in the summer). The estimate of the probability for dengue to occur is almost twice the probability of another disease during spring (except malaria) occurring, and 5 times less in summer than the reference category. When comparing the region of travel, the differentiation is significant for Angola and Europe. We can estimate, with a relatively low level of significance (7.4%), that a patient returning from Angola has almost twice the probability of a dengue infection, than other diseases (except malaria).

Malaria occurs relatively more during the spring, autumn and winter months, with no significant difference detected in the summer. During the spring and autumn, the probability of an occurrence of malaria is 4 times more likely than another diagnosis (except dengue); in winter it is 6 times more likely. Regarding the region of origin, the entire African continent was

significant, for which it is estimated that the probability of malaria is 8 times that of all other diseases (except dengue).

The explanatory models applied in the analysis of ICU (Logit model) and length of hospital stay (Poisson model) include as relevant impact factors age (years), diagnosis (reference category is other diseases) and existence of complications. Both models are globally significant and all explanatory factors are individually significant, except on what concerns the impact of dengue and NSFS on the need of intensive care.

Table 4 – Regression analysis of inpatient stays

Model		Logit model		Log-linear Poisson model	
Dependent variable		Intensive care unit		Length of stay	
Chi-square likelihood ratio	Statistic	217.791		742.506	
	Significance	0.000		0.000	
Covariates		Significance	Odds ratio	Significance	Growth index
Constant		0,017	0.043	0.000	5.716
Age		0,035	0.948	0.000	1.007
Diagnosis	Dengue fever	0.998	0.000	0.000	0,463
	Malaria	0.009	9.349	0.000	0,748
	NSFS	0.689	1.754	0.000	0,617
Existence of complications		0,000	136.469	0.000	2.619

The age was a significantly determinant factor for the duration of the hospital stay and for the ICU admission. The length of the stay increases with age (with an estimate growth of 0.7% for each additional year), the odds ratio estimate of patients that need ICU in relation to those not requiring it decreases with age.

Nosocomial infections and organ dysfunction were the main determinants of the length of stay and of the need of intensive care admission; in these cases, the length of stay is expected to increase, in average, 160%, and the need of intensive care is expected to increase to a proportion of 136 times.

Malaria was the only diagnosis with major impact on the need for intensive care, being estimated that, compared to all other diseases, a patient with malaria is 9 times more likely to

need intensive care. The length of stay is inferior in patients with dengue, malaria and NSFS. Compared to other diseases (reference category), in average, it is estimated that these patients have, respectively, a length of stay inferior in 53.7%, 25.2% and 38.3%.

3.3. REVIEW OF MAIN DIAGNOSIS

3.3.1. Malaria (53.1%)

There were 181 cases of malaria, 4 co-infected with HIV, 2 with dengue. 159 were men. 87.2% of cases were within the range of 25-54 years. *Plasmodium falciparum* was identified in 131 patients; the remainders were mixed infection (*P. falciparum* and other; 8 patients), *P. malariae* (3 patients), *P. ovale* (3 patients) and *P. vivax* (3 patients). In 31 patients it was not possible to identify the species.

Malaria was acquired in Africa in 97.1% of the cases, being 83.3% of the cases from PSAC [Angola (65.5%), Mozambique (13.2%) and Guinea (4.6%)]; 2.9% of malaria cases were from south-America countries. Most patients were living in Portugal (44.1%) and Angola (39 %), the majority were Portuguese (80%). The travel was chiefly due to work (85%). The 4 patients with malaria and inaugural HIV diagnosis were expatriate travelers from Angola (3 cases) and Mozambique (1 case).

Two patients (0.6%) diagnosed with both malaria and dengue fever were men who came from Angola.

The hospital stay was 4-10 days in most cases (63%). There were some severe cases of malaria: 10 had ARDS (Adult Respiratory Distress Syndrome) and 13 had multiple organ failure (MOF). Most had a favorable outcome; 4 deaths were registered in patients with ARDS, neurologic dysfunction and MOF.

Only 29 patients declared having fulfilled the recommended prevention.

3.3.2. Non-specified febrile syndrome (16%)

The febrile illness was cause of admission of 54 patients, 40 of which were men. A big percentage of cases was during 2009 (42.6%) (figure 6). Most patients were 30 to 44 years old (52%). 24% patients returned from Angola and 24% from Spain, most of which lived in Portugal (61.1%). The most common reason declared was business (65%). 55% patients had a hospital stay of 3 days or less.

3.3.3. Dengue fever (11.6%)

Dengue fever was responsible for 39 admissions (84.6% were men). There was an augmentation of the number of cases throughout the years, with a peak in 2013 (figure 1.3). 1 patient had previously known HIV infection. These patients were 25-49 years old (73.7%); 84% were of Portuguese nationality.

These cases were mainly imported from Angola (68.4%) and Brazil (13.2%). There were cases reported from other south-american countries, Asia, Oceania, and one case of a patient resident in Madeira island. Mostly, these patients lived in Angola (53.8%) and Portugal (43.6%). DF was associated with tourism in only 9 patients (11%).

Most patients had a hospital stay of 4 to 10 days (64.5%). All patients had a good evolution, and no patient required intensive care.

3.3.4. Others (20.8%)

All less frequent diagnoses were included in this group. The diagnosis included influenza A infection (12 cases – 3.6%), traveler's diarrhea (10 cases – 3%), respiratory infection (9 cases – 2.7%), among others (table 1). Emphasis is given to influenza A infection, with 12 confirmed cases during the year of 2009. These patients had traveled to Spain (41.7%), Brazil (16.7%) and

other south-american countries (16.7%). In some cases the origin of the infection was difficult to track because of multi-destinations.

4. DISCUSSION

The biggest evidence shown in this work was the obvious and important increase of importation diseases along the analyzed years. This augmentation pattern is expected to continue, attending to the tendency of growth of international tourism, as well as migratory flows. This develops the need of controlling the associated health issues. [12]

When comparing with international literature, namely GeoSentinel studies, it was notorious the existence of a difference in the infectious patterns of the European travelers. [13] This is due to a complex migratory network, inside and outside of Europe, with a bigger relative number of travels to endemic areas, such as Africa. Besides that, even when evaluated with the European pattern, on EuroTravNet studies [13], the Portuguese movements have a larger proportion of African destinations, of 73.5%, against 32% reported in such studies.

The reason for travel also had a substantial disparity. In most works, tourism was associated with most travels, contrarily to these results. [2-4, 13, 14] However, this is probably due to several reasons, namely inclusion of inpatients only, and the fact that expatriates are more exposed to prolonged stays, endemic countries and worse living conditions. Despite this limitation, we can conclude that among pathologies that require hospital treatment, work-travel has a bigger weight than tourism-travel.

A smashing majority of men among the returning ill travelers (83%) was reported. It has been reported that men travel more than women, and that they predominate in business travel. [15] This may add to differences in exposures, activities with higher risk and use of preventive strategies. Men usually have long stays and outside work-related activities that augment their risk of infection. Several previous studies also shown that men are more likely to contract malaria.[16-18] Besides the environmental risks, it has been suggested that there are biological factors that increase male susceptibility to mosquito-borne infections.[15]

The transmission of malaria, particularly in sub-Saharan Africa, is intimately related to the rainy season, when rainfall and warm temperatures coexist, creating conditions to the spread of malaria. [19-22] Angola, belonging to this region, has a higher frequency of patients with this diagnosis during the rainy months. Given that the incubation time for *P. falciparum* is 8 to 14 days, in non-immune people [23], the demonstration of the econometric data reflects this seasonal relation.

Along the period of analysis, two main clusters were observed. The first, in 2009, was associated with the influenza pandemic. [2] International travelers were individuals at risk when their trip involved affect areas. [24] The pandemic peak was during August of 2009. [25] This was consistent with the majority of cases reported in our study (of the 12 confirmed influenza A infections, 10 were returning of vacations during the summer months). Associated with this infection, a different destination trend was registered, with a highlight to Spain, country that acquired an important role during that year. It is important to notice that a peak of inpatients for NSFS was registered during the H1N1 pandemic (figure 1.3). The increase of febrile illness during 2009 could reflect an increased attention and fear of the circulating virus, and a real increase in disease acquisition among traveling individuals.[24] It is also possible that some cases may have corresponded to influenza A infection whose agent was not identified.

In 2013, an outbreak of dengue took place in Angola [26, 27]; it was reported by local health authorities in April 2013.[28] An increase of the number of inpatients with DF corresponded to Portuguese individuals emigrants in Angola, coming to Portugal to get treatment. Besides that, the augment registered along the years 2013 and 2014 was not only due to the dengue outbreak, but also by the increasing trend of admittances by travel-related illnesses, specifically malaria.

Given the morbidity of travel-related illnesses, it is important to reflect about the promotion of preventive behaviors and pre-travel advice relevance on the population intending to travel to endemic areas of infectious diseases, such as the African continent. A significant percentage of patients abandoned early, or never initiated, the recommended chemoprophylaxis for malaria, although some of them, due to several years of stay in endemic area, were not considered for receiving chemoprevention. Repellents and bed nets should be remembered as important mechanisms of protection from arthropods transmitted diseases during all stay in endemic areas.[29] It is of higher importance to invest on traveler's information, discuss the advantages associated with adherence to medical advices, provide practical advices [30], and increase the number of travelers who attend a pre-travel appointment[4], preferably 4 to 6 weeks before traveling. [31]

5. CONCLUSIONS

The most striking evidences of the work were the significant increase of importation diseases (27% per year), with a clear majority of male patients. It is also interesting to observe the dominance of work-related trips, predominantly to Angola, explaining the majority of malaria diagnosis (highly endemic area, longer stays, exposition risk augmentation, lack of preventive measurements). Having this characterization of the dynamic nature of importation diseases, namely the current increase registered, hospital services can anticipate and prepare to receive and adequately treat patients with these diagnoses. It would be also important to improve preventive care, given the small percentage of patients who kept the adequate recommendations.

6. LIMITATIONS

We only included inpatients, making it not possible to compare with patients with travel-related illnesses that did not fulfill hospitalization criteria. This leads to an overestimation of more serious diseases, and underestimation of other diagnoses, such as gastrointestinal disturbances or sexually transmissible diseases or dermatologic manifestations, among others.

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Reference to a book:
[2] W. Strunk Jr., E.B. White, The Elements of Style, fourth ed., Longman, New York, 2000.
Reference to a chapter in an edited book:
[3] G.R. Mettam, L.B. Adams, How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), Introduction to the Electronic Age, E-Publishing Inc., New York, 2009, pp. 281–304.
Reference to a website:
[4] Cancer Research UK, Cancer statistics reports for the UK. http://www.cancerresearchuk.org/aboutcancer/statistics/cancerstatsreport/, 2003 (accessed 13.03.03).

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COMISSÃO DE ÉTICA PARA A SAÚDE

CENTRO HOSPITALAR SÃO JOÃO, EPE

PARECER

Título da Investigação: "Doenças de Importação num Serviço de Doenças Infecciosas"

Investigador: Catarina Sofia Barbosa de Carvalho

Orientador: Dra. Cândida Abreu, Infeciologista no Serviço de Doenças Infeciosas do CHSJ

Serviço onde se realizará a Investigação: Serviço de Doenças Infeciosas; foi enviado à CES um documento autorizando a realização deste projeto, pelo Diretor do Serviço, Prof. António Sarmento

Elo de ligação: a orientadora

Promotor: N.A.

Objetivos do estudo:

Comparação e análise estatística das doenças de importação do Serviço de Doenças Infeciosas (SDI) do CHSJ, nos anos 2007 a 2014, de forma a inferir a evolução epidemiológica entre esses períodos.

Pertinência e Conceção do estudo:

Trata-se dum estudo retrospetivo, que incluirá todos os doentes internados no SDI, entre 2007 e 2014, com diagnóstico de doenças de importação.

Serão recolhidos os seguintes dados:

- ✓ demográficos (idade, sexo, país de origem e país de residência);
- ✓ diagnóstico;
- ✓ detalhes da viagem (tipo, duração e país de proveniência);
- ✓ tempo até ao internamento;
- ✓ primo-infeção ou infeção secundária;
- ✓ medidas preventivas (consulta do viajante, profilaxia pré-viagem)
- ✓ evolução clínica.

Benefício/Risco: Dada a natureza retrospectiva do estudo não existem quaisquer riscos ou incómodos para os doentes.

Respeito pela liberdade e autonomia do sujeito: Dada a natureza retrospetiva do estudo, não se aplica a necessidade da obtenção do consentimento informado.

Confidencialidade dos dados: A identidade dos doentes será ocultada; todos os dados recolhidos serão anonimizados.

Financiamento: N.A.

Indemnização por danos: N.A.

Propriedade dos dados: investigadora

CV do investigador: a investigadora é aluna do 5º ano do Mestrado Integrado em Medicina na FMUP. O seu CV adequa-se à investigação em apreço.

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Conclusão: Face ao exposto atrás, proponho a esta CES a emissão dum parecer favorável à implementação deste projeto.

Porto, 24 de abril de 2015

A relatora,

Raquel Ribeiro

Direcção Clínica
11/5/2015

AUTORIZADO

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Exmo. Senhor

Presidente do Conselho de Administração do

Centro Hospitalar de S. João – EPE

Assunto: Pedido de autorização para realização de estudo/projecto de investigação

Nome do Investigador Principal: CATARINA SOFIA BARBOSA DE CARVALHO

Título do projecto de investigação: DOENÇAS DE IMPORTAÇÃO NUM SERVIÇO DE DOENÇAS INFECCIOSAS

Pretendendo realizar no(s) Serviço(s) de Doenças Infecciosas do Centro Hospitalar de S. João – EPE o estudo/projecto de investigação em epígrafe, solicito a V. Exa., na qualidade de Investigador/Promotor, autorização para a sua efectivação.

Para o efeito, anexa toda a documentação referida no dossier da Comissão de Ética do Centro Hospitalar de S. João respeitante a estudos/projectos de investigação, à qual endereçou pedido de apreciação e parecer.

Com os melhores cumprimentos.

Porto, 13 / Abril / 2015

O INVESTIGADOR/PROMOTOR

Catarina Carvalho

7. SEGURO

a. *Este estudo/projecto de investigação prevê intervenção clínica que implique a existência de um seguro para os participantes?*

SIM ☐ (Se sim, junte, por favor, cópia da Apólice de Seguro respectiva)
NÃO ☐
NÃO APLICÁVEL ☒

8. TERMO DE RESPONSABILIDADE

Eu, Catarina Sofia Barbosa de Carvalho,
abaixo-assinado, na qualidade de Investigador Principal, declaro por minha honra que as informações prestadas neste questionário são verdadeiras. Mais declaro que, durante o estudo, serão respeitadas as recomendações constantes da Declaração de Helsínquia (com as emendas de Tóquio 1975, Veneza 1983, Hong-Kong 1989, Somerset West 1996 e Edimburgo 2000) e da Organização Mundial da Saúde, no que se refere à experimentação que envolve seres humanos. Aceito, também, a recomendação da CES de que o recrutamento para este estudo se fará junto de doentes que não tenham participado em outro estudo no decurso do actual internamento ou da mesma consulta.

Porto, 13 / Abril / 2015

O Investigador Principal

PARECER DA COMISSÃO DE ÉTICA PARA A SAÚDE DO CENTRO HOSPITALAR DE S. JOÃO

emitido na reunião plenária da CES de 24 / Abril / 2015

A Comissão de Ética para a Saúde APROVA por unanimidade o parecer do Relator, pelo que nada tem a opor à realização deste projecto de investigação.

Prof. Doutor Filipe Alm...
Presidente da Comissão de Ética