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ORIGINAL ARTICLE

Dermatology Service Utilization and Reasons for Consultation by Spanish and Immigrant Patients in the Region Served by Hospital Son Llàtzer, Palma de Majorca, Spain

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KEYWORDS

Immigrants;
Epidemiology;
Dermatology;
Service utilization;
Purpose of consultation

Abstract

Introduction: Spain has come to be one of the main European destinations for immigrants from countries with low per capita incomes. The Balearic Islands have the second largest proportion of immigrants in a Spanish autonomous community. The aim of this study was to describe the dermatology service utilization by immigrant and Spanish populations at Hospital Son Llàtzer in Palma de Majorca, Spain.

Patients and methods: A longitudinal, descriptive study was undertaken to analyze first visits to the dermatology department of Hospital Son Llàtzer between July 10, 2007 and July 9, 2008.

Results: Of the 6699 first visits, 13.2% were by non-Spanish patients, originating from 64 different countries, with Argentina, Ecuador, and Columbia the most common. Spanish patients consulted more frequently than non-Spanish patients. Patients from outside the European Union consulted most often for inflammatory conditions, whereas patients from Spain and other countries of the European Union mainly consulted for benign tumors. Consultations were for sexually transmitted disease in 2% of visits. The reason for the visit was classified as cosmetic in 14.1% of patients.

Conclusions: The dermatology service utilization by the immigrant population was lower than by Spanish patients, although with differences according to the country of origin.

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PALABRAS CLAVE

Inmigrantes;
Epidemiología;
Dermatología;
Demanda asistencial;
Motivos de consulta

Motivos de consulta dermatológicos en la población inmigrante y española del área de salud del Hospital Son Llàtzer (Mallorca)

Resumen

Introducción: España ha pasado a convertirse en uno de los principales destinos europeos de inmigrantes procedentes de países con rentas per capita más bajas. La Comunidad Autónoma de las Islas Baleares es la segunda con mayor proporción de ciudadanos de origen extranjero. Nuestro trabajo pretende describir la demanda asistencial en la población inmigrante atendida en el Servicio de Dermatología del Hospital Son Llàtzer, en las Islas Baleares, y compararla con la de la población autóctona.

Pacientes y métodos: Se trata de un estudio descriptivo longitudinal sobre las primeras visitas atendidas en el Servicio de Dermatología del Hospital Son Llàtzer desde el 10 de julio de 2007 al 9 de julio de 2008.

Resultados: Se atendieron 6.699 primeras visitas. Un 13,2% fue de origen extranjero. Se recogieron pacientes procedentes de 64 países diferentes, siendo los más frecuentes Argentina, Ecuador y Colombia. El índice de frecuentación fue mayor en pacientes españoles. Los pacientes extracomunitarios consultaron más por patología inflamatoria, mientras que los españoles y comunitarios consultaron principalmente por tumores benignos. En un 2% del global el motivo de consulta fue una enfermedad de transmisión sexual. Un 14,1% de los pacientes consultó por motivo considerado como «estético».

Conclusiones: La demanda asistencial de la población inmigrante en Dermatología es menor respecto a la de la población autóctona, aunque con diferentes peculiaridades según el área de procedencia.

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Introduction

In recent years, Spain has passed from being a source of immigrants (mainly in Latin America and Europe) to become one of the main European destinations for immigrants from countries with lower per capita incomes.¹ In 2008, the number of immigrants in Spain reached 4 473 499 (as of December 31, 2008; data from the Spanish National Institute of Statistics), which accounts for 9.7% of the resident population. The immigrant population has a mean age of 38.4 years and comprises mostly men (52.2%).² The Balearic Islands has a population of 1 001 062 (Balearic Islands Institute of Statistics census, January 1, 2006),³ including 71 232 citizens from the 25 European Union countries (EU-25, prior to the entry of Bulgaria and Romania) and 116 531 individuals from outside the EU. This makes the Balearic Islands the Spanish autonomous community with the second highest proportion of citizens born outside of Spain (after Melilla). Consequently, dermatologists in the Balearic Islands may receive a larger number of consultations from immigrants and see more cases of imported diseases. Furthermore, the difficulties associated with diagnosis of black patients and the linguistic barriers presented by non-Spanish-speaking patients can create a genuine challenge for physicians caring for the immigrant population.

The aim of this study was to describe the dermatology service utilization by immigrant and Spanish patients served by Hospital Son Llàtzer in Palma de Majorca, Spain.

Patients and Methods

A longitudinal, descriptive study was undertaken to analyze first visits to the dermatology department of Hospital Son Llàtzer between July 10, 2007 and July 9, 2008. Patients were referred from primary care, hospital emergency departments, and other specialties. Hospital Son Llàtzer is a public hospital, opened in December 2001, serving a population of 215 000. The dermatology department comprises 5 dermatology specialists.

The following data were recorded for each patient: date of first visit, patient record number, age, sex, country of origin, length of time resident in Spain, language spoken, and presenting complaint based on the International Statistical Classification of Diseases (modified ICD-9) codes for dermatological diseases. Consultations were also classified according to whether they were deemed cosmetic and whether or not they were for sexually transmitted diseases. Patients were classed as immigrants if their nationality was not Spanish and they had been resident in Spain for more than 1 year or intended to apply for Spanish residency. Children younger than 12 years whose parents were both classified as immigrants were also classified as such. Evidently, an implicit source of error is the fact that we took the patient's word as accurate without confirming the veracity of the information.

Patient origin was classified according to country of birth within the EU (EU-25 countries) or outside it. The patients were further divided into the following groups: Spain, Latin

America, European Community, Eastern Europe, North Africa, sub-Saharan Africa, and the rest of the world.

The statistical data for the reference population was obtained from the Balearic Islands Department of Health.

The presenting complaint was classified according to the modified ICD-9 codes for skin diseases.⁴ In addition, 10 large diagnostic groups were established: bacterial skin diseases, viral skin diseases, mycoses, parasitic diseases, benign tumors, premalignant tumors, malignant tumors, skin adnexal diseases, inflammatory disease, and pigmentation disorders.

A descriptive analysis of the variables was performed and shown as proportions or means, depending on the variable, and 95% confidence intervals (CI) for the most relevant variables. Continuous variables that did not display a normal distribution were compared by Mann-Whitney test, and post hoc analysis was done using the Kruskal-Wallis test with the Bonferroni correction. Comparisons of proportions were carried out using the Fisher exact test. An exploratory multivariate analysis was used to analyze the association between age, sex, and consultation for sexually transmitted diseases or for cosmetic reasons. Statistical analysis was performed using SPSS v. 14.0.

Results

A total of 6699 first consultations was recorded during the study period.

There was a greater number of female patients (3916, 58.5%) than male (2793, 41.5%). The mean age was 41 years (95% CI, 40.4-41.5), and there were 1155 patients (17.2%) aged 16 years or less.

A total of 883 patients (13.2%) were classified as immigrants: 183 from the EU (2.7%) and 700 from countries outside the EU (10.5%). Among the immigrant patients from the EU, 66.1% were female (121) and 33.9% were male (62), while among those from outside the EU, 57.7% were female (404) and 42.3% were male (296).

The mean age of Spanish patients was 42.1 years (95% CI, 41.5-42.6), while that of immigrants from within the EU was 44.8 years (95% CI, 41.7-47.8) and that of immigrants from outside the EU was 31.0 years (95% CI, 29.7-32.3). Comparison of the mean age between immigrant patients from outside the EU with the other 2 groups revealed a statistically significant difference ($P < .001$).

The immigrant patients were from a total of 64 different countries. The following 15 were the most frequent: Argentina (110, 12.5%), Ecuador (79, 9.0%), Colombia (71, 8.0%), Morocco (66, 7.5%), Bolivia (64, 7.3%), Germany (47, 5.3%), France (32, 3.6%), United Kingdom (31, 3.5%), Bulgaria (29, 3.3%), Senegal (27, 3.1%), Uruguay (27, 3.1%), Nigeria (25, 2.8%), Chile (21, 2.4%), Italy (18, 2.0%), and Romania (16, 1.8%). The country of origin reported by immigrant patients is shown in Figure 1.

The mean length of time that immigrants from the EU had been resident in Spain was 13.7 years (95% CI, 12-15 years) and the median was 10 years (interquartile range [IQR], 4-20 years). For immigrants from outside the EU, the mean was 6.5 years (95% CI, 6.0-7.0 years) and the median was 5.0 years (IQR, 3.0-8.0 years) ($P < .001$).

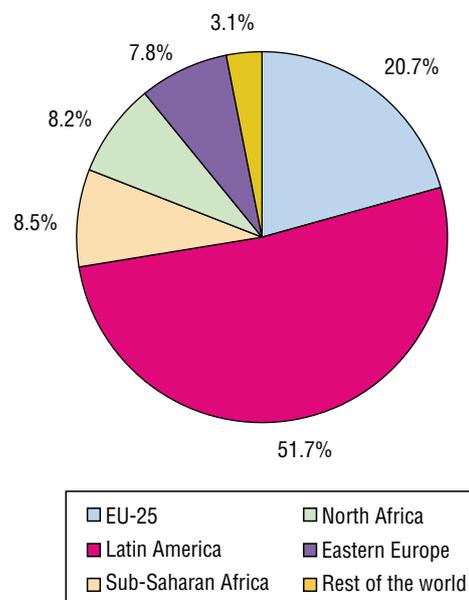


Figure 1 Distribution of patients according to country of origin. EU-25 indicates the 25 countries of the European Union (prior to entry of Bulgaria and Romania).

Seventy-four patients (9.1% of immigrants from outside the EU) were not registered in the Spanish Social Security system.

Among the patients from non-Spanish-speaking countries, 14.6% (69 patients) did not speak Spanish.

The frequency of visits (proportion of patients for whom first consultations were recorded during the study period as a percentage of the total number of patients assigned to Hospital Son Llàtzer in the social security system) was 2.71% for Spanish patients and ranged from 1.05% to 2.04% for immigrant patients according to their country of origin. These differences were statistically significant when compared with the group of Spanish patients ($P < .0001$, Table 1).

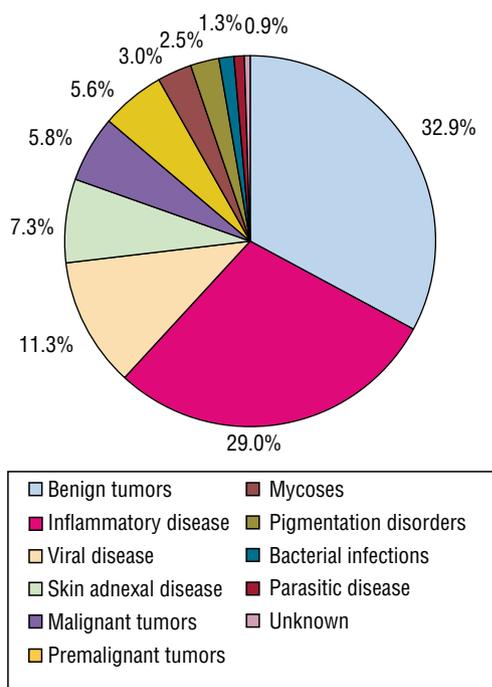
Analysis of the diagnoses by groups (Figure 2) showed that benign tumors were the main presenting complaint (33%), followed by inflammatory disease (29%), viral skin diseases (11%), and skin adnexal diseases (7%). The most commonly observed individual diagnoses are summarized in Table 2. A total of 213 different diagnoses were recorded.

The 3 most common diagnoses among immigrant patients from outside the EU were inflammatory disease (37.7%), benign tumors (23.6%), and viral skin diseases (11.0%). In immigrant patients from the EU, they were benign tumors (36.1%), inflammatory disease (27.9%), and malignant tumors (8.2%), while in Spanish patients the most frequent diagnoses were benign tumors (33.9%), inflammatory disease (28.0%), and viral skin diseases (11.4%). Parasitic diseases, skin adnexal disease, inflammatory disease, and pigmentation disorders were observed more often in immigrant patients from outside the EU than in Spanish patients ($P < .05$). In contrast, benign, malignant, and premalignant tumors were observed less frequently in

Table 1 Frequency of Dermatology Consultations According to Country of Origin

Origin	Patients from Hospital Son Llàtzer	Reference Population	Percentage	95% CI
EU-25	183	8973	2.04	1.75-2.33
Latin America	457	24 821	1.84	1.67-2.01
Sub-Saharan Africa	75	3948	1.90	1.47-2.33
North Africa	72	3623	1.99	1.53-2.44
Eastern Europe	69	3444	2.00	1.54-2.47
Rest of the world	27	2572	1.05	0.66-1.44
Spain	5816	214 809	2.71	2.64-2.78

Abbreviations: CI, confidence interval; EU-25, 25 countries of the European Union (prior to entry of Bulgaria and Romania).

**Figure 2** Distribution of diagnoses (grouped diagnoses).

immigrants from outside the EU (Table 3). Only one case of cutaneous tuberculosis was recorded in a patient from Morocco; the disease was contracted in the patient's country of origin. No tropical or imported diseases were diagnosed during the study period.

The distribution of malignant tumors according to the country of origin is shown in Table 4. The only statistically significant difference was observed for nonmelanoma skin cancer in immigrant patients from outside the EU ($P < .0001$ compared with Spanish patients and $P < .01$ compared with immigrants from within the EU).

In 2% of all consultations (136), the main presenting complaint was a sexually transmitted disease (syphilis, genital warts, genital herpes simplex, sexually transmitted molluscum contagiosum), and this proportion increased to 3.6% in immigrants from outside the EU. Nevertheless, patient origin was not associated with sexually transmitted disease when adjusted for age and sex. Sexually transmitted

diseases were much more common in patients aged between 20 and 45 years (odds ratio [OR], 8.01; 95% CI, 5.2-12.5) and in men (OR, 4.5; 95% CI, 3.1-6.6); the differences were statistically significant ($P < .0001$).

The reason for consultation was considered cosmetic in 14.1% of all patients (944). This classification included all benign and asymptomatic skin lesions without repercussions in which the patient continued to request treatment when the nature of the complaint had been explained. When only female patients were considered, the percentage increased to 16.7%, and when female immigrants from outside the EU were considered it increased to 19.3%, although the differences were not statistically significant between patients of different origin. The frequency of cosmetic consultations was significantly higher in women than men (OR, 1.71; 95% CI, 1.5-2.0; $P < .0001$).

Discussion

For some years now, rather than a source of immigration, Spain has been a destination for immigrants from low-income countries who are attracted by the promise of a better quality of life for themselves and their families.¹ This influx has increased in recent years, and as of December 31, 2008, the number of immigrants with a resident's permit was 4 473 499. In the Balearic Islands, in addition to receiving immigrants from low-income countries, there has also been an influx of pensioners from European countries (mainly Germany and the United Kingdom) with a high socioeconomic status. As a result, data obtained in this Spanish autonomous community may not be easily extrapolated to other autonomous communities. According to census data on January 1, 2006, 18.8% of the 1 001 062 residents of the Balearic Islands were from other countries (7.1% from EU-25 countries and 11.6% from non-EU countries).³

In our study, 13.18% (883) of the patients seen in the dermatology department were classified as immigrants (2.7% [183] from the EU and 10.5% [700] from outside the EU). The more widespread use of private healthcare services by immigrants from the EU may explain the relative reduction in the proportion of those patients seen in our study. These findings contrast with those in recent studies by Porta et al⁵ (Sarragossa) and Albares

Table 2 Most Common Presenting Complaints

Spanish Patients				Immigrants from the EU			Non-EU Immigrants				
Diagnosis	n	%		Diagnosis	n	%		Diagnosis	n	%	
1	Melanocytic nevus	842	14.5	Melanocytic nevus	32	17.5	Melanocytic nevus	66	9.4		
2	Seborrheic keratosis	432	7.4	Seborrheic keratosis	12	6.6	Acne	46	6.6		
3	Common wart	404	6.9	Basal cell carcinoma	10	5.5	Common wart	33	4.7		
4	Actinic keratosis	329	5.7	Common wart	10	5.5	Atopic dermatitis	33	4.7		
5	Psoriasis	271	4.7	Actinic keratosis	9	4.9	Urticaria	28	4		
6	Basal cell carcinoma	251	4.3	Acne	9	4.9	Eczema	25	3.6		
7	Acne	221	3.8	Atopic dermatitis	9	4.9	Psoriasis	21	3		
8	Acrochordon	185	3.2	Acrochordon	6	3.3	Acrochordon	21	3		
9	Molluscum contagiosum	154	2.6	Psoriasis	5	2.7	Dermatophytosis	18	2.6		
10	Atopic dermatitis	134	2.3	Seborrheic dermatitis	4	2.2	Molluscum contagiosum	18	2.6		
11	Eczema	133	2.3	Squamous cell carcinoma	3	1.6	Seborrheic keratosis	17	2.4		
12	Cyst	110	1.9	Dermatophytosis	3	1.6	Genital warts	16	2.3		
13	Urticaria	102	1.7	Age spots	3	1.6	Seborrheic dermatitis	16	2.3		
14	Seborrheic dermatitis	94	1.6	Molluscum contagiosum	2	1.1	Contact dermatitis	14	2		
15	Dermatophytosis	85	1.5	Eczema	2	1.1	Cyst	13	1.9		

Abbreviations: EU, European Union.

Table 3 Distribution of Grouped Diagnoses According to Patient Origin

	Spanish				Immigrants from the EU				Non-EU Immigrants			
	n	Percentage	95%CI		n	Percentage	95%CI		n	Percentage	95%CI	
Bacterial	78	1.34	1.05	1.64	1	0.55	0.00	1.61	10	1.43	0.55	2.31
Viral	663	11.40	10.58	12.22	15	8.20	4.22	12.17	77	11.00	8.68	13.32
Mycosis	171	2.94	2.51	3.37	6	3.28	0.70	5.86	26	3.71	2.31	5.12
Parasites	39	0.67	0.46	0.88	2	1.09	0.00	2.60	16	2.29	1.18	3.39
Benign tumors	1974	33.94	32.72	35.16	66	36.07	29.11	43.02	165	23.57	20.43	26.72
Premalignant tumors	351	6.04	5.42	6.65	11	6.01	2.57	9.45	12	1.71	0.75	2.68
Malignant tumors	365	6.28	5.65	6.90	15	8.20	4.22	12.17	10	1.43	0.55	2.31
Skin adnexal diseases	403	6.93	6.28	7.58	12	6.56	2.97	10.14	75	10.71	8.42	13.01
Inflammatory disease	1626	27.96	26.80	29.11	51	27.87	21.37	34.36	264	37.71	34.12	41.30
Pigmentation disorders	120	2.06	1.70	2.43	4	2.19	0.07	4.30	42	6.00	4.24	7.76
Unknown	26	0.45	0.28	0.62	0	0.00	0.00	0.00	3	0.43	0.00	0.91
Total	5816				183				700			

Abbreviations: CI, confidence interval; EU, European Union.

Table 4 Distribution of Malignant Tumors According to Patient Origin

	Spanish	Immigrants from the EU	Non-EU Immigrants	Total
Nonmelanoma skin cancer	338	14	9	361
Melanoma	27	1	1	29
Total	365	15	10	390

Abbreviations: EU, European Union.

et al⁶ (Alicante), with immigrant populations of 4% and 4.1%, respectively, although Albares et al used the term immigrant to refer to economic migrants. Other recent studies in other specialties found a range of results in other autonomous communities (4.1% to 9.4%).^{7,8} It is difficult to make comparisons with the results of other studies in

different geographic regions and different specialties, as the patient profile and immigrant population is subject to significant variation.

As in the Spanish population, we observed a greater proportion of female than male patients, accounting for 57.7% (404) of immigrant patients from outside the EU, as

has also been reported in other studies undertaken in Spain (56.8% in a study by Porta et al⁵).

Immigrants from outside the EU were significantly younger than the Spanish population (mean age of 31 years compared with 42 years in Spanish patients and 44.8 years in immigrants from EU countries). This finding was statistically significant and could explain some of the differences observed in the skin conditions presented by this group, who had a lower frequency of nonmelanoma skin cancer.

According to a survey recently carried out among 924 professionals (primary care physicians, pediatricians, and nurses in Catalonia and Madrid), 2 out of 3 healthcare professionals believe that the immigrant population requires more attention from healthcare services than the rest of the population.⁹ However, our data agree with those from other studies in finding that the frequency of specialist consultation is lower among immigrants than in Spanish patients.^{6,10} Other studies have only shown increased service utilization by immigrant patients in relation to emergency services.¹¹⁻¹³

Over the study period, 17.2% (1155) of the patients were aged 16 years or less. Although it was not one of the primary objectives of this study, we found that the proportion of children seen in our department was higher than in a recent study by Casanova et al,¹⁴ who reported a rate of 12.1%.

Patients from Latin America represented the largest subgroup (with Argentina being most common country of origin), followed by patients from the European Community, sub-Saharan Africa, North Africa, and Eastern Europe. While in our study we found that Argentina was the most common country of origin, other similar studies have found Ecuador, followed by Colombia, to be the most common.^{5,10} In order to compare service utilization according to country of origin we would need to have data on the number of patients from each country who are resident in our referral area. However, we only had data available from the Balearic Islands Department of Health on the number of patients according to geographic region.

The presenting complaints observed in our study differ from those found in other studies, in which infectious diseases were the most common complaint among immigrants.^{5,6} In our study, the total number of infectious diseases accounted for 18.4% of presenting complaints, situating them in third place behind inflammatory skin diseases and benign tumors. Overall, malignant and premalignant tumors were the third most common cause of consultation (11.4%), compared with the 16.9% observed by Pérez-Suárez et al.¹⁵

Sexually transmitted disease accounted for 2% of first visits in our department, although this percentage increased to 3.6% if only immigrants from outside the EU were considered. The proportions observed in our study were greater than those reported by Porta et al⁵ both for Spanish patients and immigrants.

Finally, cosmetic consultations still represented a large proportion of consultations (14.1%). However, we only found statistically significant differences between women and men, irrespective of their country of origin. The study

by Macaya et al¹⁶ found that 25% of patients consulted for cosmetic treatment.

Conclusions

In contrast to the perceptions revealed in surveys of healthcare professionals, the dermatology service utilization by the immigrant population is lower than that of the Spanish population, irrespective of the country of origin. However, there are certain differences, as the immigrant population is younger and has a lower number of patients with tumors and a higher proportion of patients with inflammatory disease, skin adnexal disease, and pigmentation disorders (patients from outside the EU). Furthermore, there were no cases of tropical or imported diseases in these patients. Finally, the different cultural practices among immigrant patients are associated with greater difficulty of diagnosis and treatment of common skin disorders.

Conflicts of Interest

The authors declare no conflicts of interest.

Acknowledgments

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