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Rapid Increase in Incidence of Melanoma In Situ in Girona (Spain), 1994-2005. Effectiveness of Public Education Campaigns About Early Diagnosis

Rápido incremento de la incidencia del melanoma in situ en Girona (España) 1994-2005. ¿Efectividad de las campañas de diagnóstico precoz?

To the Editor:

In recent decades, the incidence of invasive cutaneous melanoma has risen considerably in white populations, with annual increases ranging from 3% to 7%.[1] While Spain still has one of the lowest incidence rates and levels of mortality in Europe for this disease,[2,3] recent studies also reflect an increase in this country.[4] However, there is no epidemiologic data on the incidence in Spain of melanoma restricted to the epidermis, that is, melanoma in situ (MIS).

To obtain more information about the epidemiologic trends and incidence of MIS, we analyzed the data provided by the Girona Cancer Registry, a population-based registry covering the province of Girona with an at-risk population of 687 331 according to the 2006 census.

We calculated crude and age-adjusted incidence rates standardized to the world standard population using the direct method. Using the joinpoint regression model we estimated the annual percentage change (APC) in the incidence of MIS over the 12 years of this study (1994-2005).[5] Differences in MIS trends by sex were studied using the t test for the variable age and the χ^2 test for the categorical variables.

In total, 688 patients resident in the province of Girona were diagnosed with cutaneous melanoma between 1994 and 2005. The diagnosis was invasive melanoma in 550 cases (79.94%) and MIS in 138 (20.06%). All the cases analyzed were confirmed histologically. Of the 138 patients with MIS, 84 (60.9%) were women (mean age at diagnosis, 62.96 years; range, 22-92 years), while 54 (39.1%) were men (mean age, 61.20 years; range, 25-88 years). There were no statistically significant differences between the sexes. The most common sites were the head and neck (42.8%) followed by the trunk (22.5%). The distribution by sex was not statistically significant (*P*=.20). Histology results revealed that approximately 60% of cases were lentigo maligna. This group of patients had a mean age at diagnosis of 69.2 years (Table 1), significantly older than the mean age of the other histologic groups (data not shown).

In men, the incidence of MIS increased from 0.54 cases per 100 000 man-years in the period 1994 to 1996 to 1.44 cases per 100 000 man-years in the period 2003 to 2005. This trend was even more marked among women, with an increase from 0.68 cases per 100 000 women-years in the period 1994 to 1996 to 2.23 cases per 100 000 women-years in the period 2003 to 2005. During the 12 years covered by this study, the increase in the incidence of MIS in our region has been much greater than the increase in invasive melanoma.[4] The annual percent change was 11.51% for men (95% confidence interval [CI], 4.61-18.86) and 11.43% for women (95% CI, 2.04-21.69) (Table 2).

Population-based epidemiologic studies on the incidence of MIS are rare, and to date only 4 studies have been published (Sweden 1968-1992,[6] Southern Australia 1981-1992,[7] United States of America [US] 1975-1997,[8] and Queensland [Australia] 1982-2002[9]). All of these studies reported a substantial annual increase in the incidence of MIS (around 10%), a finding consistent with our result (11%).

It is important to highlight the fact that the patients in our population diagnosed with MIS were some 3 years older than the patients with invasive lesions (data not shown), a finding similar to that reported in the US study, in which the age difference was 4 years.[8] The older age at diagnosis of MIS in our population can be explained by the fact that the predominant histologic type of MIS lesion was lentigo maligna, a melanoma that primarily affects exposed areas (head and neck) in older patients.[10,11]

There is no doubt that the public is now better informed about the risks of exposure to the sun. This greater awareness, in conjunction with early detection campaigns (such as Euromelanoma Day started in 2000 by the European Academy of Dermatology[12]), improved access to health care, and the more frequent excision of suspicious pigmented lesions,[13] may have contributed to the increase in the incidence of MIS.

Monitoring trends in melanoma by stage will make it possible in the future to evaluate the effectiveness of cutaneous melanoma prevention campaigns in Spain. Consequently, there is a need to include more information concerning the diagnostic characteristics of the cases of cutaneous melanoma in Spanish population-based cancer registries.

Table 1 Characteristics of Melanoma In Situ by Sex in Girona, 1994-2005

Variable	Total	(%)	Men	(%)	Women	(%)	*P* Value
Age							
Mean, y	62.28		61.20		62.96		.524
Range, y	(22-92)		(25-88)		(22-92)		
Age Groups, n (%)							.215
15-44	22	(15.9)	7	(13.0)	15	(17.9)	
45-64	42	(30.4)	21	(38.9)	21	(25.0)	
≥65	74	(53.6)	26	(48.1)	48	(57.1)	
Site n (%)							.200
Head and neck	59	(42.8)	26	(48.1)	33	(39.3)	
Trunk	31	(22.5)	14	(25.9)	17	(20.2)	
Upper limb	7	(5.1)	3	(5.6)	4	(4.8)	
Lower limb	16	(11.6)	2	(3.7)	14	(16.7)	
Others and NOS	25	(18.1)	9	(16.7)	16	(19.0)	
Histology n (%)							.459
SSM	4	(2.9)	1	(1.9)	3	(3.6)	
LM	79	(57.2)	28	(51.9)	51	(60.7)	
ALM	1	(0.7)	0	(0.0)	1	(1.2)	
Others and NOS	54	(39.1)	25	(46.3)	29	(34.5)	
Period of diagnosis n (%)							
1994-1999	44	(31.88)	18	(33.3)	26	(30.9)	
2000-2005	94	(68.12)	36	(66.7)	58	(69.1)	
Total	138	(100.0)	54	(39.1)	84	(60.9)	

Abbreviations: ALM, acral lentiginous melanoma; LM, lentigo maligna; NOS, not otherwise specified; SSM, superficial spreading melanoma.

Table 2 Incidence of In Situ Melanoma in Girona: Trends in the Period 1994-2005

	1994-1996	1997-1999	2000-2002	2003-2005
In situ				
Men				
No.	6	12	13	23
CR	0.78	1.53	1.57	2.43
AAR	0.54	0.95	0.97	1.44
$APC_{1994-2005}$	11.51% (95% CI, 4.61-18.86)[a]			
Women				
No.	9	17	22	36
CR	1.15	2.13	2.62	3.85
AAR	0.68	1.4	1.5	2.23
$APC_{1994-2005}$	11.43% (95% CI, 2.04-21.69)[a]			

[a]Statistically significant.

Abbreviations: AAR, incidence adjusted for age to the standard world population for 100 000 person-years; APC, annual percent change; CI, confidence interval; CR, crude incidence rate per 100 000 person-years; No., average number of new cases per year.

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Lichen Sclerosus Atrophicus at an Insulin Injection Site: An Unusual Koebner Phenomenon

Liquen escleroso y atrófico en el lugar de inyección de insulina: fenómeno de Koebner inusual

To the Editor:

Over 30% of diabetic patients develop skin conditions during the course of their disease. The following can occur: a) diseases such as scleredema, bullosis diabeticorum (diabetic bullae), granuloma annulare, waxy skin with limited joint mobility of the fingers, finger pebbling, eruptive xanthomas, yellow skin, and diabetic dermopathy; b) bacterial infections, such as erythrasma, necrotizing fascitis, and malignant external otitis, and mycotic infections, such as mucocutaneous candidiasis and rhinocerebral mucormycosis; and c) reactions to antidiabetic drugs.[1]

The prevalence of adverse skin reactions to insulin has decreased since the appearance of purified and recombinant forms (50%-60% in the 1950s and 1960s to below 3% in the late 1990s). Allergic reactions are usually seen at the site of injection and can appear as early or late erythema, pruritus, and induration. Lipoatrophy, lipohypertrophy, abscesses, xanthomatosis, bullous eruptions, necrosis, purpura, granulomas, hyperpigmentation, keloids, and amyloidosis can also be found at these sites.[2]

We describe the case of a woman with type 2 diabetes mellitus who developed lichen sclerosus et atrophicus at the sites on the abdomen where she injected insulin. The patient was a 55-year-old woman with a past history of subtotal thyroidectomy for thyroid follicular adenoma and total hysterectomy with bilateral adnexectomy for endometriosis. She had type 2 diabetes mellitus that had developed 18 years earlier and for which she was started on insulin in 2003. At the time of consultation, the patient was on an insulin regimen of bolus injections of long-acting insulin and short-acting analogs (54 units of insulin glargine in the morning and 6 units of insulin aspart at night), plus metformin and repaglinide. She was referred to our outpatient clinic by her endocrinologist for the assessment of pruritic skin lesions that had appeared 1 year earlier on the abdomen.

Physical examination revealed multiple whitish papules with keratotic follicular plugs on both sides of the abdomen, forming 2 indurated plaques with well-defined borders (Figure 1A). In addition, the central area of the lesion located on the right side of the abdomen was blistered and crusted (Figure 1B). A whitish, shiny plaque with intralesional purpuric elements was observed in the perianal area (Figure 2). The patient reported that the lesions on the abdomen appeared in the area where she regularly injected insulin.

A biopsy of the lesion was taken from the plaque on the right side of the abdomen. Histopathology revealed a thinned epidermis, a small subepidermal vesicle, edema with homogenization of the collagen fibers, and sparse cellularity in the upper dermis. Follicular plugs and a mild chronic inflammatory infiltrate were observed in the mid dermis (Figure 3). Additional tests—complete blood count, biochemistry, levels of antinuclear and anti-extractable nuclear antigen antibodies, thyroid stimulating hormone, protein electrophoresis, immunoglobulin