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Summary. - A total of 1360 cases of cutaneous malignant melanoma (CMM) consecutively diagnosed at the Istituto Dermopatico dell’Immacolata (IDI) in Rome, during the period 1962-1991, were reviewed. There was a positive trend of thin (Breslow thickness < 1.49 mm) lesions at diagnosis in comparison to thick lesions, with more severe prognosis (p < 0.05). CMM on the trunk and upper legs increased more than CMM on the face (p < 0.05).

There are suggestions that the incidence of CMM in the hospital referral population, resident in Central-South Italy, has been steadily rising. This trend could be due not only to a referral bias related to a growing public concern about "bad moles", but also to a real increase in the incidence of CMM.

Key words: melanoma, epidemiology, Italy.


Parole chiave: melanoma, epidemiologia, Italia.

Introduction

During the past decades the incidence and mortality of cutaneous malignant melanoma (CMM) has been increasing dramatically in Caucasian populations [1]. This trend was not only observed in countries, such as Australia, New Zealand and the USA, which have high incidence rates, but also in Mediterranean countries, which experience low CMM rates [2]. In Italy, available data indicate that the crude annual incidence rate of melanoma (ICD-9 172) is about 4 per 100,000 [3]. Proposed explanations for this epidemic are the more frequent intermittent sun exposures [4] and the increase in early CMM diagnoses [5].

In order to verify how much these explanations apply to a population resident in Central-South Italy, we looked for changing trends in CMM features at diagnosis during the past three decades.

Materials and methods

The study population consisted of all the 1360 first diagnoses of CMM made at the IDI in Rome, from 1962 to 1991. IDI is a Dermatology specialized hospital whose catchment area for CMM includes the city of Rome, its surrounding region and Southern Italy.

Data about demography, clinical and histological features, and site of the CMM lesion were collected from the existing hospital file [6]. Since, in the sixties and seventies, Breslow thickness and other histological prognostic factors were not always recorded, microscopic slides of all cutaneous lesions of all cases with missing data were reviewed and classified.

Time trends in features of CMM were evaluated subdividing the study period into three decades from 1962-1971, 1972-1981 and from 1982-1991. Statistical comparisons were carried out using the χ2 test.
Fig. 1. - Cutaneous melanoma by clinical type in the last three decades. Data collected at IDI, 1962-1991.

Fig. 2. - Cutaneous melanoma by Breslow tumor thickness at diagnosis in the last three decades. Data collected at IDI, 1962-1991.

Table 1. - Sex and age of patients and histologic features (regression and ulceration) of the CMM lesions at diagnosis by decade. Data collected at IDI, 1962-1991.

<table>
<thead>
<tr>
<th></th>
<th>Decade</th>
<th>1962-71</th>
<th>1972-81</th>
<th>1982-91</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of cases</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Median age in years (Range)</td>
<td></td>
<td>51 (17-86)</td>
<td>47 (16-84)</td>
<td>52 (1-95)</td>
</tr>
<tr>
<td>Sex ratio (M/F)</td>
<td></td>
<td>1.4</td>
<td>1.7</td>
<td>1.3</td>
</tr>
<tr>
<td>Presence of regression (%)</td>
<td></td>
<td>11 (13.3%)</td>
<td>60 (16.0%)</td>
<td>211 (23.8%) (*)</td>
</tr>
<tr>
<td>Presence of ulceration (%)</td>
<td></td>
<td>45 (54.2%)</td>
<td>148 (39.4%)</td>
<td>230 (25.9%) (*)</td>
</tr>
</tbody>
</table>

(*) p < 0.001 (test for trend)
Fig. 3. - Cutaneous melanoma by anatomic site in the last three decades. Data collected at IDI, 1962-1991.

Results

From 1962 to 1991, there has been a steady increase of the number of CMM cases (Fig. 1). A total of 85 cases were diagnosed in the first decade, while in the second and third decade they were 378 and 897 respectively. Median age and sex ratio of the study population showed no clear temporal pattern (Table 1).

In contrast with the acral lentiginous and lentigo maligna types, which increased more than the nodular type only in the third decade (p < 0.01), the increase of the superficial type was higher during all the study period (p < 0.01) (Fig. 2).

With regard to the prognostic factors, Fig. 3 shows a definite increase of CMM with Breslow thickness up to 1.49 mm in comparison to those with thickness more than 3.00 mm (p < 0.05). The results in Table 1 show that the proportion of tumors with regression is increasing with time (p < 0.001), while the opposite trend is detectable for the proportion of tumors with ulceration (p < 0.001).

As far as the site of tumoral lesions is concerned, the number of CMM observed on the trunk (p < 0.004), and upper legs (p < 0.02) is increasing more than that on the face.

Discussion

As expected, we found that CMM diagnoses progressed dramatically between 1962 and 1991. Since in this period there was no evidence of major changes in the validity of the diagnostic techniques [7, 8], the observed rise might be due either to an increase in the incidence rate or to a changing pattern of the hospital referrals population and/or to an enlargement of the hospital catchment area.

However, the last hypothesis does not appear to justify such a consistent increase. It seems more probable that the rising trend observed in Rome during the seventies [9], persisted in the eighties. Breslow thickness is the main prognostic factor of CMM [10]. The less thick the lesion at diagnosis, the higher is the chance of surviving. So early detection is critical for coping with CMM. Fortunately, our results show a positive trend towards thin (< 1.49 mm) lesions. This finding could have inflated our case collection with earlier cases in the last two decades. However, such an occurrence could be only a partial explanation for the increase of CMM incidence, since vital statistics indicate a steady mortality rise for CMM [11, 12]. And since, at the same time, survival has been improving [13], the observed trend must be due to a real increase in CMM occurrence.

If early diagnoses contributed to the increased incidence of CMM during the thirty year study period, many of the diagnosed lesions would have had a very slow progression. Superficial melanoma increased more than other clinical types during the last two decades, this could be due to a particularly mild nature of this clinical type. Alternatively it is conceivable that a type-specific new risk factor has been acting during the past decades.

Results in Fig. 2 indicate that CMM on the trunk and upper legs increased more than CMM on the face (p < 0.05). This finding is consistent with the evidence that intermittent sun exposure is a risk factor for CMM [13]. This last association together with the observation that habits such as sun-bathing became popular in Italy after World-war II lead to the conclusion that this risk factor could be the cause of the observed epidemic.

We recognize that possible changes in the IDI hospital referrals population could also have contributed to determine the observed phenomenon. However the
absence of apparent trends in the age and sex distributions of case suggests a relative stability of the population. Moreover, our results are consistent with the current epidemiological knowledge on CMM, with particular reference to its increased incidence.

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REFERENCES


