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Malignant melanoma
Review of 7 years (1998-2004) at Hospital Central of Funchal

Rubina Alves[1], Tiago Esteves[1], Jorge Marote[1], Carmo Caldeira[2], Pedro Costa Neves[2] and Anabela Faria[1]

Departments of [1]Dermatology and [2]General Surgery, Hospital Central, Funchal, Madeira, Portugal.

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ABSTRACT

The authors reviewed all cases of melanoma diagnosed in the Hospital Central of Funchal, from January 1998 through December 2004. Fifty-one patients were studied, with ages ranging from 20 to 85 years. Sixty-five per cent were female. The most common anatomical location in females was the lower limbs (45%) and in males the trunk (44%). At the time of diagnosis the majority of tumours were in stages I and II (57%). All patients were submitted to conventional surgery.

Eighteen patients (35%) developed metastatic disease and 21 patients (41%) died (18 of whom from direct causes).

INTRODUCTION

Melanoma results from the malignant transformation of melanocytes. Although most melanomas are in the skin they can also appear in other locations, such as the eyes and mucous membranes (mouth, larynx, vagina and anus).

Correspondence:
Rubina Alves
Serviço de Dermatologia
Hospital Central do Funchal
Funchal
Madeira
Portugal.
Tel.: +351 291 705 730
E-mail: rubinaalves@gmail.com

The incidence of melanoma has been increasing in the last decades around 3% to 8% annually[1-3]. Australia is the country with the highest incidence rates[3]. Over the years, educational programmes have played an important role in the early detection of melanoma, although its treatment in advanced stages is still limited. The mortality has also increased, although in a smaller scale. Melanoma is the 5th and 6th cause of death in men and in women, respectively[1]. The median age at diagnosis is 45-55 years[1].

The most related risk factors are: genetic markers (mutation CDKN2a), family and personal history of dysplastic naevi or melanoma, presence of congenital naevi,

atypical naevus syndrome, the number (> 50) and size (> 5 mm) of melanocytic naevi, skin type I/II and ultraviolet irradiation - sunburns in childhood and intermittent sun exposure[1-3]. However, melanoma can arise in any age group and in individuals without history of substantial sun exposure[1].

Melanoma can be classified into four main clinical subtypes: superficial spreading (60%-70%), nodular (15%-30%), lentigo maligna (5%-15%) and acral lentiginous (5%-10%)[3]. As in all neoplasms, prognosis depends on the stage at the time of diagnosis. In surgically treated melanomas with thickness ≤ 1 mm, the survival rate at the end of one year is superior to 90%. For thicker tumours the survival varies between 50% and 90%[1]. Because of its aggressive behaviour and tendency to metastasise, prevention and early detection are of major importance.

The present work is a review of all melanoma cases diagnosed and treated in our Hospital over a 7-year period (1998--2004).

MATERIAL AND METHODS

We performed a retrospective analysis of all patients with a histological diagnosis of melanoma in the period between the 1st of January 1998 and 31st of December 2004 (7 years), in our Hospital.

The data was obtained from the clinical records of the Departments of Dermatology, General Surgery, Plastic Surgery and Oncology. The studied clinico-pathological parameters were: sex, age, anatomical location, Breslow thickness, Clark's level, clin-

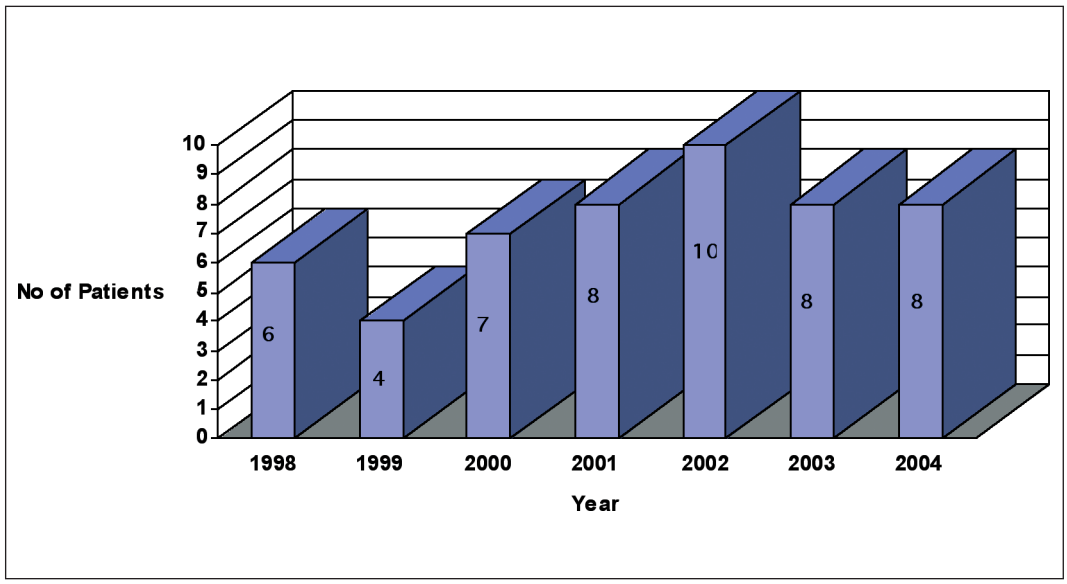

Fig.1 - Distribution of malignant melanoma cases per year.

ical stage at diagnosis, clinical evolution and follow-up.

RESULTS

Over the study period, a total of 51 cases of melanoma were examined, with variable distribution along the years, with a larger number of cases in the year 2002 (Fig. 1). Of the 51 patients, 33 (65%) were females and 18 (35%) were males. The mean age was, in both sexes, 61 years, with ages ranging from 20 to 85 years (Fig. 2).

The most common anatomical locations were the lower limbs (thigh, leg and foot) in females, with 45% of cases (15 patients), and the trunk in males, with 44% (8 patients) (Figs. 3 and 4). Four of our patients had ocular melanoma. All tumours were primary and the clinical diagnoses were histologically confirmed.

Breslow thickness was ≤ 1.0mm in 6 cases , between 1.01 and 4,0 mm in 25 cases and > 4.0 mm in 14 cases; this index could not be assessed in 6 cases due to lack of data (Fig. 5). Nineteen tumours (37%) were of Clark level III and no data was available in five cases (Fig. 6).

At the initial diagnosis, 57% of patients were in stages I and II, 10% in stage III and (25%) were in stage IV (Fig. 7).

All patients were treated by conventional surgery.

One patient (male, with melanoma of the right foot) died 13 days post-surgery from cerebral and pulmonary metastases. The follow-up on the remaining 50 patients ranged between 1 and 8 years, with 30 patients staying disease free. Of the 21 patients who died, metastases developed in 18 cases (35%) and were located, from decreasing order of frequency, in the

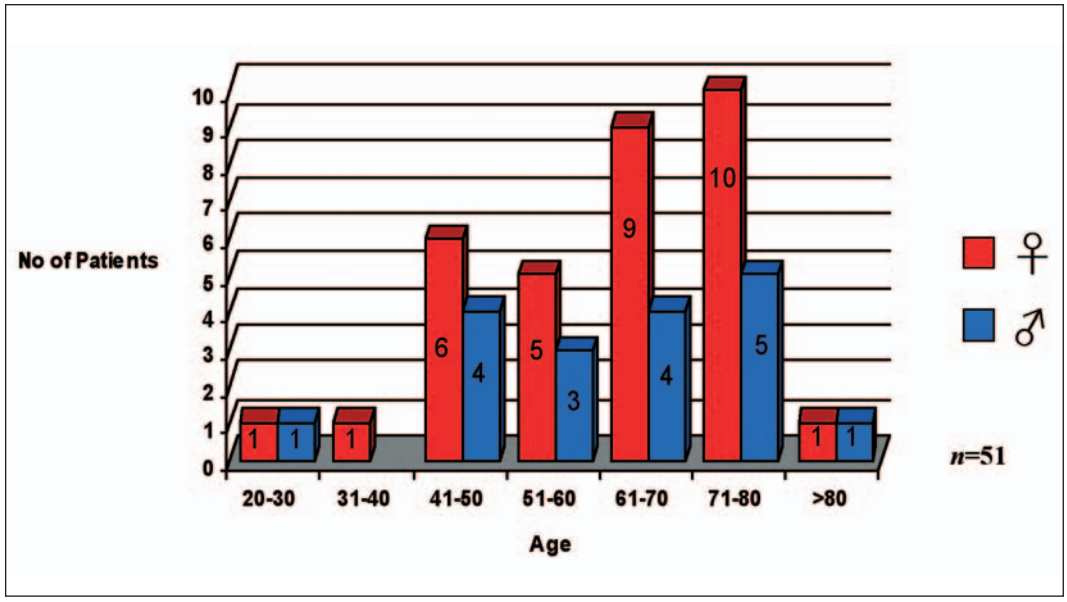

Fig. 2 - Age and sex distribution of MM patients.

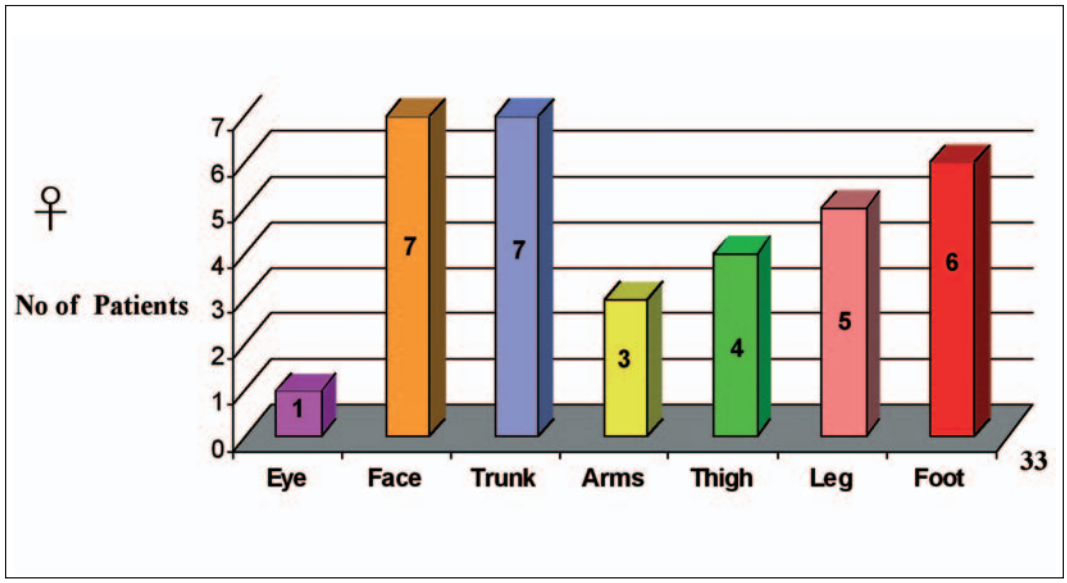

Fig. 3 - Anatomical location in female MM patients.

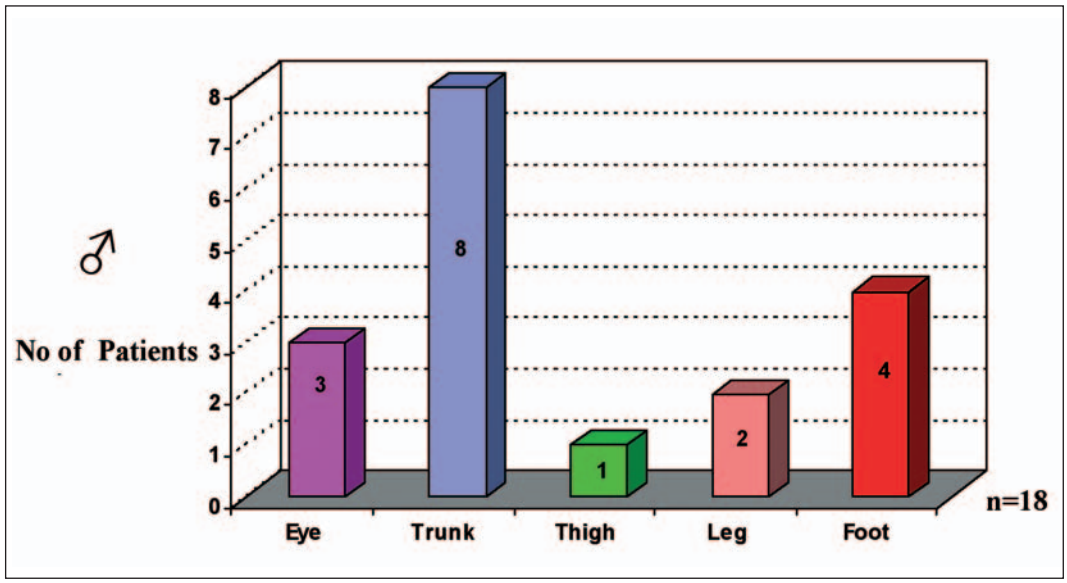

Fig.4 - Anatomical location in male MM patients.

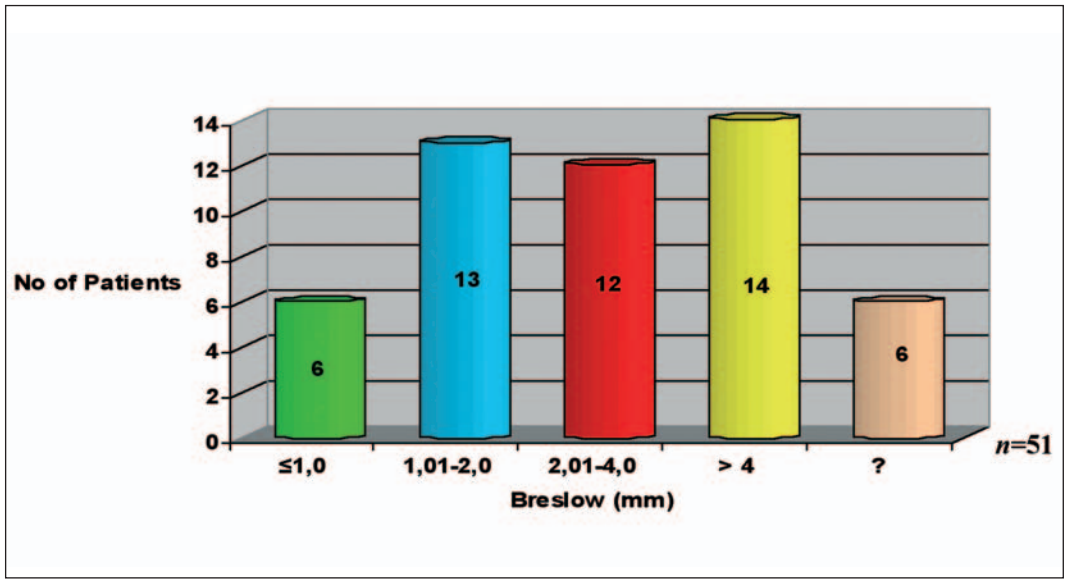

Fig. 5 - Breslow thickness of tumours.

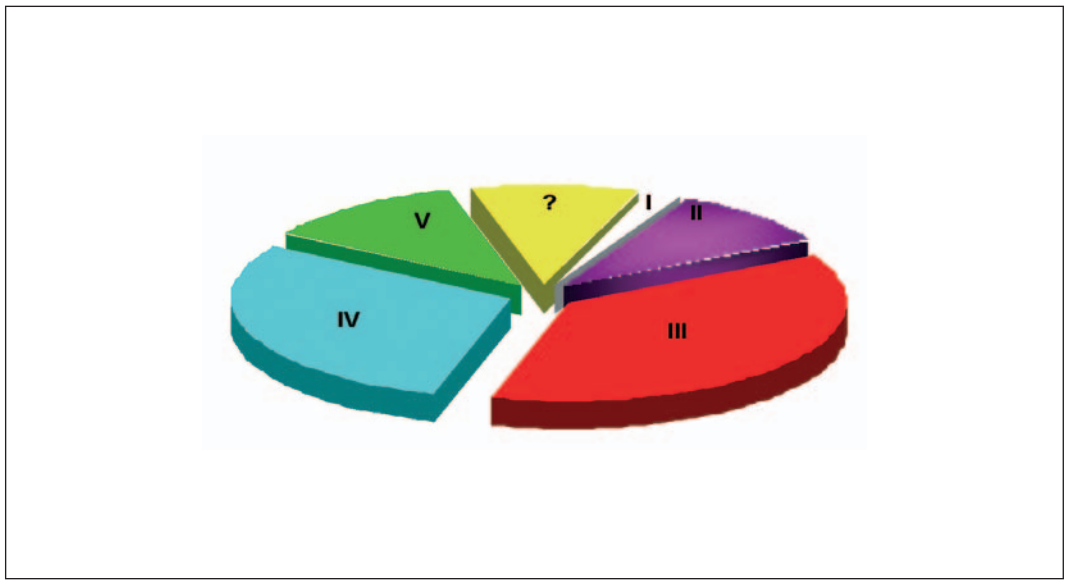

Fig. 6 - Clark's level of tumours.

inguinal lymphatic ganglia, lungs and brain, liver, skin and mediastinum. Three (6%) died from unrelated causes, namely myocardial infarction, stroke and pneumonia. Thus, the actual mortality rate related to melanoma was 18 patients, corresponding to 35% of the cases (Table I and Fig. 8). Of the 18 patients who died from direct cause of melanoma, 12 (67%) were in clinical stage IV, at the time of diagnosis (Fig. 9). The majority of these patients (78%) died 1--3 years after histological diagnosis.

CONCLUSION

During the study period (1998-2004), we did not observe a gradual increase in the number of new melanoma cases, unlike what is reported in the literature[2,3]

We found a higher prevalence in females, with a proportion of 65% females versus 35% males (1.9:1), which is in agreement with the published data[5,6].

The mean age at diagnosis, was 61 years, in both sexes, which is slightly older than that of other studies (45-55 years)[1].

The location more frequently found in women was the lower limbs and in men it was the trunk, which is in agreement with the literature.

All our patients were submitted to conventional surgery with safety margins, followed, in some patients, by chemotherapy and/or immunotherapy with interferon-α.

Breslow thickness, the main independent prognostic indicator for melanoma, was > 4 mm in 14 cases, which reflects a worse survival. Clark level III applied to 19 cases.

Fifty-seven per cent of our cases were in clinical stages I and II, 10% in stage III and a high percentage of cases in the stage IV (25%). According to the 2007 Practice

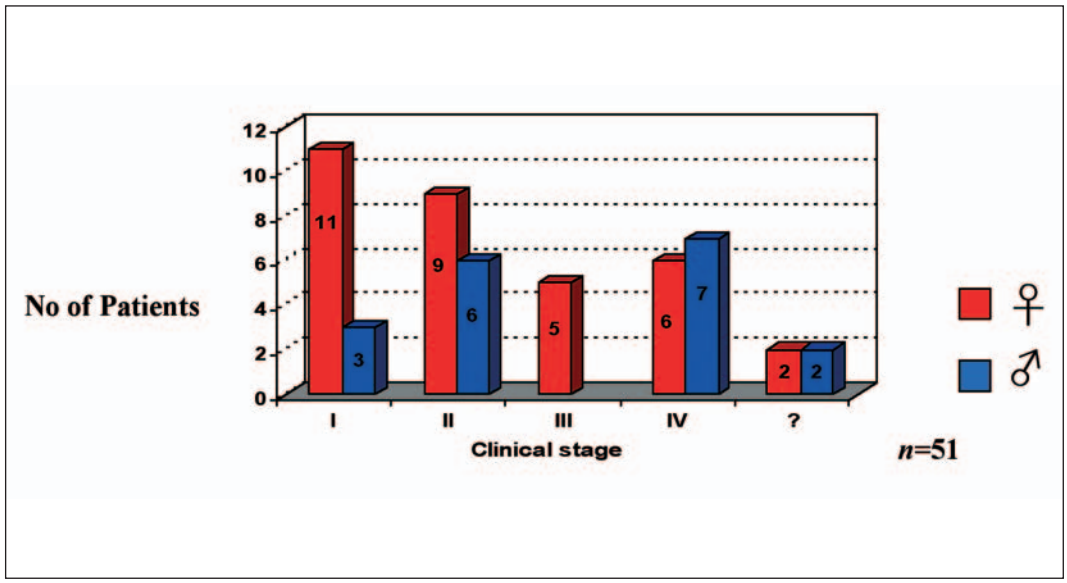

Fig. 7 - Clinical stage of MM.

TABLE I
Follow-up of Melanoma Patients

Follow-up (years)	No. of living patients	Metastases F	Metastases M	Deceased patients F	Deceased patients M
< 1	44	5	6	2	5 (4+1*)
1-3	35	6	0	7 (6+1*)	2
3-5	31	1	0	4	0
> 5	30	0	0	1 (0+1*)	0
Total	30	12	6	14	7
	30 (59%)	18 (35%)		21 (41%)	

F = females; M = males
* Death not related with melanoma.

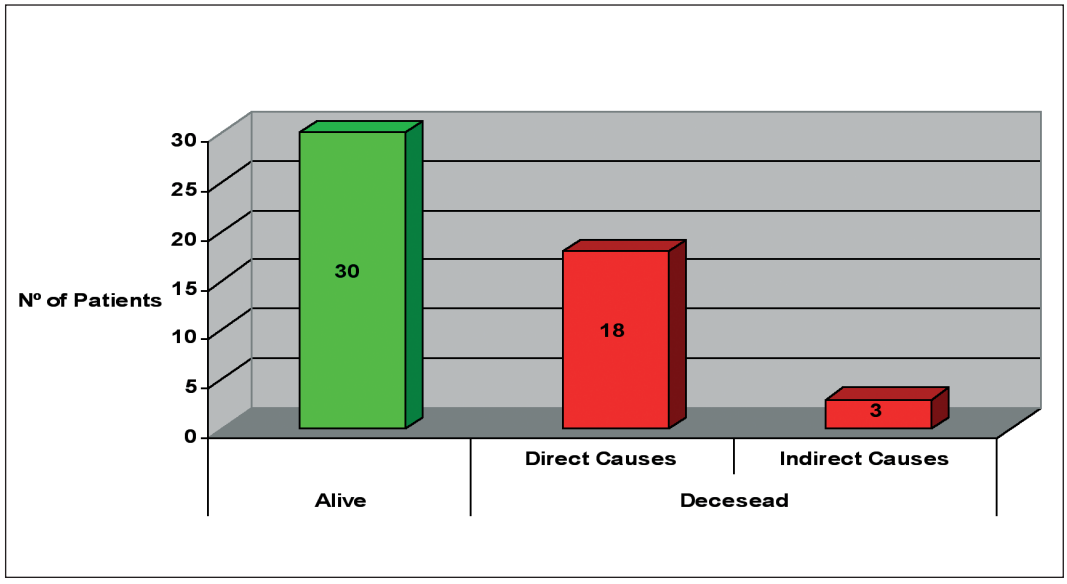

Fig. 8 - Mortality of MM patients.

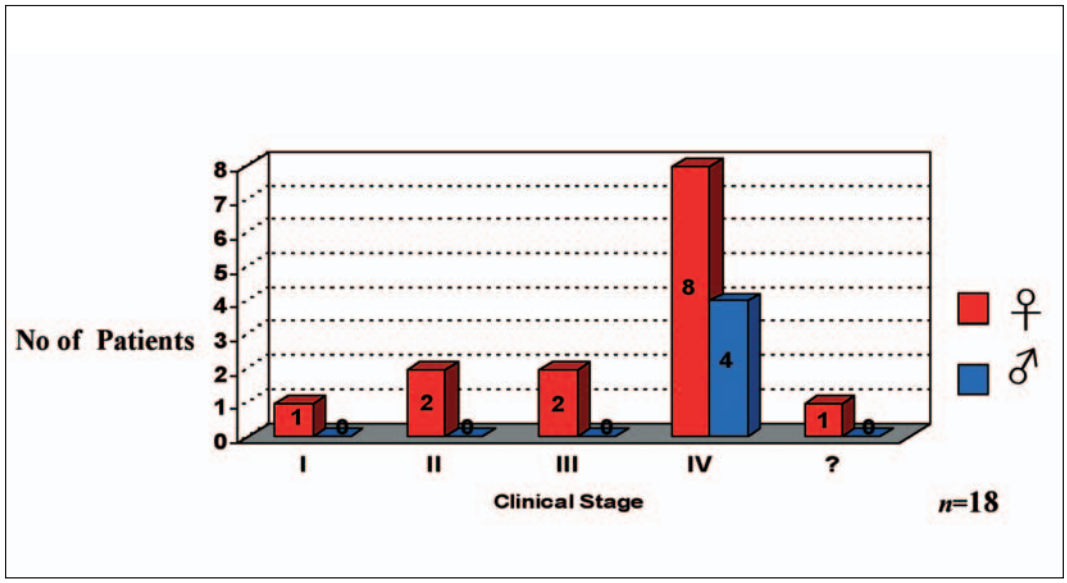

Fig. 9 - Mortality vs. clinical stage.

Guidelines in Oncology and with base in the American Joint Committee on Cancer (AJCC) staging system for melanoma, it is considered that 82%-85% of the patients with melanoma have localized disease (stages I or II), 10%-13% have regional disease (stage III) and 2%-5% have metastatic disease (stage IV), at the moment of the diagnosis.

In our patients, the mortality directly attributable to the melanoma was of 35%; most of these patients (78%) died 1-3 years after histological diagnosis.

Melanoma is an aggressive tumour and, in a significant percentage of cases, the diagnosis is made at a late stage of the disease, accounting for a high mortality. It is important to give continuity to the educational campaigns through pamphlets, newspapers, television, etc., that may lead to early and effective detection. Early diagnosis and surgical excision of melanoma are still the main keys for the decrease of morbidity and mortality of this tumour[2,10].

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