

## Acral Melanoma: Experience of Dermatology Department, Hassan II University Hospital of Fez in Morocco

Case Series

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### Abstract

Acral melanoma represents 3 to 13% of all cutaneous melanoma in Caucasians. In Morocco, this location is predominant. Through our study, we intend to describe the epidemiological, clinical, pathological, and prognosis of acral melanoma cases listed in dermatology department of Hassan II University Hospital of Fez in Morocco, in the period from January 2009 and April 2014.

**Key words:** Acral Melanoma; Amelanotic Melanoma; Trauma.

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### Introduction

Acral melanoma is a very rare variety of cutaneous melanoma, it is defined as a melanoma located on the non-hair-bearing skin of the palms and soles or under the nails [1]. amelanotic malignant melanoma is sometimes misdiagnosed. The prognosis of this tumor remains reserved. We report the epidemiological, clinical, dermoscopic, histopathological features, prognosis and evolving of our population.

### Materials and Methods

All cases of acral melanoma were identified retrospectively between January 2009 and April 2014. For each patient, epidemiological information (age, gender, medical history, sun exposure, previous trauma, disease duration before diagnosis), clinical, dermoscopic, histological, therapeutic and outcome were recorded.

### Results

We compiled 54 cases of melanoma during the study period, 31 patients had an acral location, which represents 57% of all melanomas. The male to female ratio was 1/ 1.2, with a mean age at the time of diagnosis of 61 (32-86). 80% of patients were

fitzpatrick's skin type IV, without history of excessive sun exposure. Only 8 patients (25%) reported previous trauma. The notion of manipulation was reported in 11 cases (35% of patients). The most common site was the foot (87%), with one case of melanoma of the thumb and another of the index. The pigmented form (77, 4%) and the exophytic one (35%) were predominant. The size varied from 0.5 to 12 cm. The average time to diagnosis was 30 months (3 months-10 years). The most common dermoscopic features were: parallel ridge pattern, irregular diffuse pigmentation, polymorphous vessels, blue-white veil. The Breslow thickness was > 4mm in 35.4% of cases and the most common histological type was the acral lentiginous melanoma (38.7%). Metastases were found at diagnosis in 55% of patients, dominated by the lung (67.7%) the lymph node (47.7%), bone and liver (13%), and at last brain and adrenal metastases (6.54 %). 45% of patients were classified as stage IV. The search for C-Kit mutation and sentinel lymph node were not performed in any of our patients. Different treatments were given to patients depending on stage. Five patients died after an average time of 9,3 months, 12 patients were lost of the follow immediately, and 12 patients after a mean follow up of 6 months.

### Discussion

Melanoma is an aggressive malignancy whose incidence has increased in worldwide in white populations, especially where fair-skinned peoples receive excessive sun exposure over the last 20 years. The acral melanoma is a rare variety which represents only 2-13% of all melanomas in Caucasians [2], however, this location is predominant in North Africa (more than 50% of melanomas in Tunisia [3] and Algeria [4]) and sub-Saharan Africa; according to the study of Pitche et al [5]; 63, 5% of melanomas Togo are localized on the feet and 19% of the hands, these results are similar to the figure of 57% found in our series, this location is also common in Asians (35-49%), Hispanic (20-34%) and African Americans (50-70%) [1,2,6,7].

The acral melanoma, like other subtypes of melanoma is predominant in female patients in caucasians, the male/female ration is 1 / 1.6 [8]. However, this figure is a trend to be reversed in our country with a male / female ratio of 1.2 in our series, this result is also similar to those recorded in Tunisia (1.19) [3] and Togo

(1.03) [5]. In Asian male predominance is much sharper, with a sex ratio that exceeds 2 for all melanomas or 6 for acral melanoma [9,10]. The average age of our patients was 61 years, which joins the data in the literature [8].

The acral melanoma occurs most often like a black or brown macule with irregular edge, nodules, or exophytic tumors; in our series, this last form was predominant, because probably of the diagnostic delay and self manipulation; which also may participate in tumor dissemination (45% of patients were classified stage IV (according to the sixth edition of the pTNM classification of the International Union Against Cancer (UICC) and the American Joint Committee on Cancer (AJCC)) and increased Breslow thickness (> 4mm in 35.4% in our series). Amelanotic malignant melanoma variety was found in 20% of our patients; this form may mimic other entities such as pyogenic granuloma, poorly plantar wart or wound [11], which can participate in the diagnostic delay. The predominant histological type is the acral lentiginous melanoma which joined the literature data [3,8].

Unlike other types of melanoma, sun exposure does not appear to play a role in acral melanoma, the concept of trauma, long disputed, is currently controversial; in the retrospective study of Kaskel [12], only 8,7% (32 patients) of the patients considered an association of trauma and melanoma formation likely, of these 32 patients, 22 patients reported a single event, and 10 patients a persisting irritation. He concluded, that based on epidemiological, clinical and scientific research to date, there seems to be no evidence of the role of trauma in the pathogenesis of formation of melanoma.

Briggs [13] says that, if trauma as a common event at acral sites is a cofactor for melanoma, then the incidence of subungual and other acrolentiginous melanomas should consequently be higher. Several authors have pointed to the possibility that previous injuries were coincidences recalled to the memory of the patients during the subsequent appearance of a tumor (recall bias) and that secondary trauma have played a revealing role in attracting the attention of the patient or physician to a preexisting lesion. Moreover, this notion of trauma was found in 8 cases in our series. [11].

Acral melanomas have a low incidence of BRAF mutations but are more likely to harbor mutations of KIT. KIT (CD117) encodes a tyrosine kinase receptor for the stem cell factor and plays a key role in melanocytic development, migration, and proliferation. It is the target of several small molecule inhibitors such as imatinib and sunitinib, which are already used in the clinic and have significantly improved survival in gastrointestinal stromal tumor (GIST) patients with activating KIT mutations. A recently published study showed that imatinib significantly prolongs the lifespan of patients with metastatic melanoma harboring KIT mutations [1].

C-KIT mutation is detected in approximately 23% to 36% [14,15]

acral melanoma in Caucasians, it is less common among Asians, in the study of Si et al [16] it is present in 11.9% of acral melanomas.

It is always important to consider the C-KIT mutational status of acral melanoma in each ethnic group, to predict the effectiveness of targeted therapies [17].

In our patients were given different treatments depending on the stage, the search for C-Kit mutation was not performed in any case, do not allow the use of targeted therapies.

## Conclusion

The acral melanoma is a very aggressive tumor whose incidence is increasing; a good knowledge of these clinical presentations, an adequate care, as well as specific preventive messages to our population may guarantee a better prognosis.

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