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# ACRAL MELANOMA – A REPORT OF 122 CASES

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**Summary**

The study includes 122 patients with acral melanoma (about 9.2% of all 1325 melanoma patients treated in the University Hospital for Tumors, Zagreb, Croatia from 1975 to 2002). Of them, there were 76 (62.3%) female and 46 (37.7%) male patients, with a mean age of 58 years. In 88 (72.1%) of the cases, the tumor was located on the legs and 34 (27.9%) of the patients had the tumor on the hands, of whom 15 (12.3%) under the nail plate. In the majority of cases, surgical treatment included wide excision of primary tumor and plastic reconstruction, or amputation in case of subungual melanoma. Dissection of clinically confirmed metastases in regional lymph nodes and sentinel node biopsy were performed in 35 (28.7%) and 2 (1.6%) of the patients, respectively. The five-year survival rate was 50% in stage I and II and 20% in stage III patients.

KEY WORDS: *acral melanoma, surgical treatment, survival*

**AKRALNI MELANOM – PRIKAZ 122 SLUČAJA**

**Sažetak**

U radu su analizirana 122 bolesnika s akralnim melanomom ili oko 9,2% od 1.325 ukupno liječenih u Klinici za tumore u Zagrebu, od 1975 do 2002. Liječeno je 76 (62,3%) žena i 46 (37,7%) muškaraca prosječne dobi 58 godina. U 88 (72,1%) bolesnika tumor je bio na nogama, u 34 (27,9%) bolesnika na rukama, a među njima bilo je 15 (12,3%) ispod noktiju. Kirurško liječenje najčešće je uključivalo široku eksciziju primarnog tumora i plastiku, a kod melanoma ispod noktiju, amputaciju. U 35 (28,7%) bolesnika učinjena je disekcija klinički dokazanih metastaza u regionalnim limfnim čvorovima, a u 2 (1,6%) bolesnika učinjena je biospija sentinel čvora. Petogodišnje preživljenje u bolesnika stadija I i II bilo je 50%, a u stadiju III 20%.

KLJUČNE RIJEČI: *akralni melanom, kirurško liječenje, preživljenje*

## INTRODUCTION

According to its clinical and pathohistological features, melanoma is classified into 4 types: lentigo malignant melanoma, superficially spreading melanoma, nodular melanoma and acral melanoma.

Acral melanoma usually occurs on the extremities and their distal parts covered with hairless skin (palms, soles, fingers) (Figure 1).

The highest incidence of acral melanoma has been reported in Japanese, African and North American blacks (1-4,13-15). Some authors consider the terms acral melanoma, acral-lentiginous melanoma and palmar-plantar-subungual-mucosal melanoma (P-S-M melanoma) to be synonyms (5, 16). For its histologic resemblance to lentigo malignant melanoma, acral melanoma is also often called acral-lentiginous melanoma (6, 16). Acral melanoma has a relatively poorer prognosis than tumors localized on other parts of the extremities. Misdiagnosis or late diagnosis is reported to be one of the major reasons for that poorer prognosis. It especially applies to acral and plantar melanoma. Some authors report even 2/3 of patients undergoing a minor surgical proce-

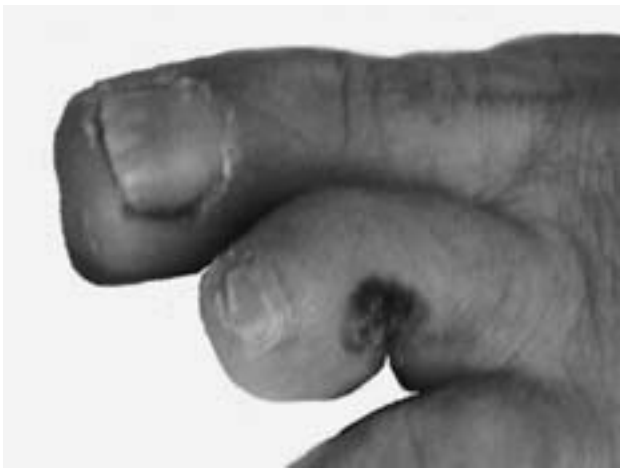

*Figure 1. Acral melanoma on the left second toe*

dure before getting the right diagnosis, and only 50% of them with the diagnosis made within two years of the onset of first symptoms (7). The fact that no other neoplasm of the skin mimicks more other conditions than subungual melanoma may be regarded as an extenuating circumstance for physicians. The partial list of diseases includes: keratocanthoma, Bowen's disease, hematoma, glomus tumor, piogenous granuloma, foreign body granuloma, paronychia, anthrax.

## PATIENTS AND METHODS

Among 1325 malignant melanoma patients treated in the University Hospital for Tumors, Zagreb, Croatia in 27 years, 122 (10%) had acral melanoma. Acral melanoma includes malignant tumors localized on the palms, soles or subungually. This anatomic definition should be be distinguished from pathohistological diagnosis of acral lentiginous melanoma described by Reed et al. (8). Clinical data for each patient included age, sex, clinical status before treatment and at the last control examination. The survival time of all patients was followed up from the date of histologic diagnosis to the date of death. Pathohistologic examination included routine histologic examination and immunohistochemical examination of sentinel lymph nodes.

## RESULTS

The group of 122 patients with acral melanoma comprised 76 (62%) female and 46 (38%) male patients. The youngest patient was 12, and the oldest was 84 years of age – mean age 58 years. Localization of primary tumor in the 122 patients is shown in Figures 2 and 3.

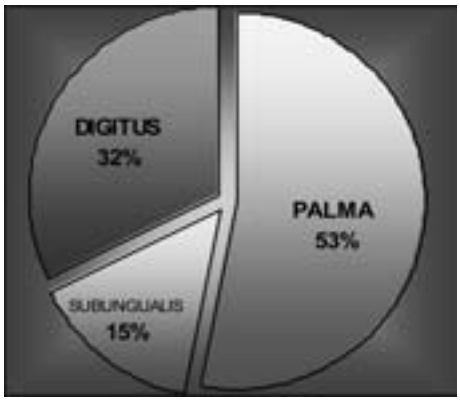


*Figure 2. Localization of acral melanoma of the hand*

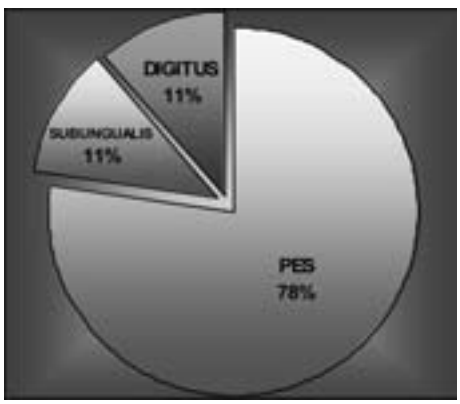


*Figure 3. Localization of acral melanoma of the sole*

The commonest localization of the tumor was on the sole found in 68 (56%), subungually in 10 (11%), while palmar melanoma was found in 18

*Table 1.*

*SURGICAL MANAGEMENT OF ACRAL MELANOMA*

| | |
|---|---|
| Excisio | 14 |
| Excisio + SNLB | 2 |
| Excisio + Dissectio | 10 |
| Excisio + Plastica | 58 |
| Excisio + Plastica + Dissectio | 22 |
| Amputatio | 12 |
| Amputatio + Dissectio | 3 |
| Exarticulatio | 1 |
| Total | 122 |

*Table 2.*
*HISTOLOGIC CLASSIFICATION OF ACRAL MELANOMA AND SURVIVAL*

| CLARK | NO. OF PATIENTS | SURVIVAL (%) |
|---|---|---|
| I | 5 | 100 |
| II | 15 | 75 |
| III | 36 | 70 |
| IV | 24 | 30 |
| V | 13 | 27 |

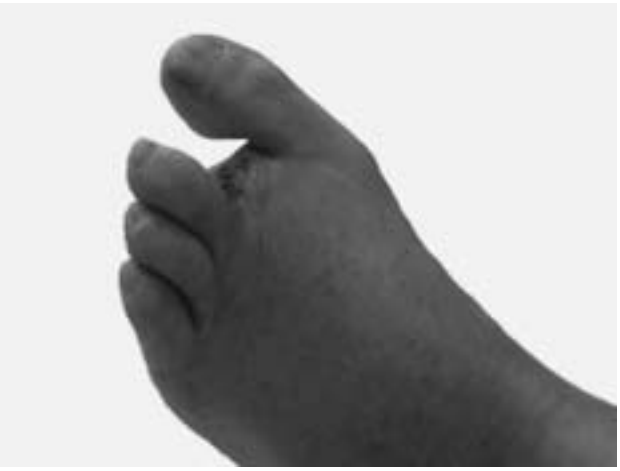

*Figure 4. Left second toe amputation for melanoma.*

(15%) of the patients. At the time of diagnosis, 35 (28.6%) of the patients had metastases in the regional lymph nodes. As the study included patients treated over a long period, treatment modalities for acral melanoma were different (Table 1).

Wide excision of primary tumor and repair of the defect with Thiersch grafts were applied in the majority of patients. In case of acral and subungual melanoma, amputation of the entire digit or the distal part of the metacarpal, or metatarsal bone thereof (Figure 4).

Regional lymph node dissection and sentinel node biopsy with histologically negative results were additionally performed in 35 and 2 patients, respectively. One patient underwent exarticulation of the extremity for sanitary reasons. Adjuvant chemotherapy was received by 35 patients. The relationship between survival and histologic Clark's classification is shown in Table 2.

The majority of patients presented with Clark level III or IV tumor, while only 5 patients had level I tumor according to Clark's classification. The average duration of follow-up was 6 years. Metastatic disease was developed by 30 patients (10 regional metastases, 10 distant metastases, 10 local recurrence). Five-year surival rate for stage I and II patients and for stage III patients was 50% and 20%, respectively.

## DISCUSSION AND CONCLUSION

The studied group of 122 patients with acral melanoma accounted for 9.2% of 1,325 malignant melanoma patients treated in the University Hospital for Tumors, Zagreb, Croatia. Other authors report even a higher incidence of acral melanoma in some countries (35%) (3, 4, 9, 10, 16). The mean age of our patients was 58 years, which is similar to data reported in some other studies (5, 10, 11). The most commonest site of acral melanoma in the studied group includes soles and the subungual region, which is also consistent with literature results (5, 9, 10, 14). Tumor thickness showed to be the most singificant prognostic factor. The difference in five-year survival rates as reported in some studies may result from a different number of patients, different statistic methods and different treatment modalities applied (12). Reasons for a relatively poorer prognosis in acral melanoma patients are controversial. Possible reasons may include hidden tumor localization, especially on the soles, that leads to delayed lesion detection and therefore the delayed onset of treatment. This study includes patients treated during a 27-year period, resulting in different treatment approaches. The most frequent treatment modality in the studied patients consisted of wide excision of the primary tumor and defect coverage with free skin graft. In patients with subungual melanoma, amputation of the involved digit was performed. A third of the patients underwent a single act primary tumor excision and regional lymph node dissection. In two of the patients, biopsy of the sentinel node was performed. Taking all these facts into consideration, we may conclude that the survival rate in patients with acral melanoma, as well as for other malignancies, can be improved with early diagnosis and adequate treatment of the primary lesion.

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