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Original Research

Evaluation of the Demographic and Clinical Features of Skin Cancers: A Single-Center Experience

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ABSTRACT

Objective: This study aimed to present the clinical and demographic features of patients who underwent skin cancer surgery at our center during the last 10 years. Localization, age, sex, and subtype mapping of head and neck cancers were particularly evaluated.

Methods: A retrospective evaluation was conducted of the patient data recorded over the last 10 years in the information processing system of our institute. Age, sex, tumor localization, and subtype, if indicated, were recorded.

Results: The data of 455 patients were obtained from the our hospital archive scan. Of these, 342 (75.1%) patients had basal cell carcinoma (BCC), 99 (21.8%) had squamous cell carcinoma (SCC), 6 (1.3%) had basosquamous cell carcinoma (BSCC), and 8 (1.8%) had malignant melanoma (MM). BCC was most commonly found in men (M/F: 175/167) and the nasal region. SCC was seen more frequently in men (M/F: 52/47) and the cheeks. BSCC was most common on the cheek (3 patients, 50%) and MM (4 patients, 50%) on the scalp.

Conclusion: There are very few epidemiological studies on skin cancers throughout the world and especially in Turkey. This study showed that SCC was more common in men and located on the cheek, whereas MM was found to be more common on the scalp. Residents of the Çukurova region, an eastern Mediterranean region, are exposed to high levels of sunlight. We believe that the difference in demographic and clinical features of skin cancers in this region may be due to this.

Keywords: Basal cell carcinoma, malignant melanoma, squamous cell carcinoma

INTRODUCTION

Malignant skin cancers are generally classified as keratinocytic and melanocytic tumors. Keratinocytic or non-melanocytic skin cancers (NMSC) comprise basal cell carcinoma (BCC), squamous cell carcinoma (SCC), and more rarely, basosquamous cell carcinoma (BSCC). These are the most seen tumors worldwide, especially in white races. The frequency of BCC in the USA has been reported to be 33%–39% in men and 23%–28% in women (1, 2). Although NMSC are widespread, the morbidity and mortality rates are not high. Despite significant developments in the diagnostic parameters of melanoma, the same developments have not been seen for the diagnosis of NMSC. For these types of tumors, the most important data are obtained clinically, and diagnosis is made according to these data.

BCC is more often encountered and originates from germinative cells found in the hair root follicles in the epidermis. The most significant factor playing a role in the etiology of this tumor is UV light. BCC is usually seen in white-skinned people and the geriatric population. SCC forms because of the malignant transformation of epithelial keratinocytes in the skin and mucosal surfaces (3). Chronic inflammation, chronic wounds, and wound scars are thought to play a role in the etiology of SCC. While acute and intense exposure to sunlight have a role in the etiology of BCC, long-term chronic exposure plays a role in the etiology of SCC (3, 4). Malignant melanoma (MM) melanocytes are thought to develop with intense UV exposure and other etiological reasons (5). The etiology of skin cancers varies according to geographical region, and no study in literature was found for the Çukurova region in south-east Turkey.

This study aimed to develop a demographic map of skin cancers in the Çukurova region.

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METHODS

A retrospective examination was made of the data of patients who presented with a skin tumor at our center in the Çukurova region between 2009 and 2019. Approval for the study was granted by the Ethics Committee of Adana City Training and City Hospital (2019/550). Informed consent was obtained from all the study participants. A retrospective scan was made of patient records from September 2009 to December 2019. The patients included in the study were those who were histopathologically diagnosed with NMSC (BCC, SCC, BSCC) and MM. Data related to age, sex, and tumor type and localization were analyzed. Only patients with sufficient data were considered in our analysis. The study excluded patients with multiple skin lesions, primary tumors in any tissue, and chronic autoimmune diseases.

Statistical Analysis

The data were analyzed using the Statistical Package for the Social Sciences (SPSS) software (Version 16.0. SPSS Inc.; Chicago, IL, USA). Conformity of the data to normal distribution was checked using histograms and the Shapiro-Wilk Test. Descriptive data were given as mean ± standard deviation (SD) values or number (n) and percentage (%).

RESULTS

A total of 455 patients with complete data were included in the study. Because of unavailable necessary data, 23 patients were excluded from the study. Diagnoses were determined as BCC in 342 cases, SCC in 99, BSCC in 6, and MM in 8.

Demographic Data of Patients with BCC

Of the total 455 patients included in the study, BCC was diagnosed in 342 (75%), of which 175 (51%) were men and 167 (49%) were women with a mean age of 66.03±13.90 years. BCC was seen most often in the sixth and seventh decades of life (Figure 1).

Findings regarding the localization of the lesions are summarized in Figure 2. Localization had not been recorded in 38 patients. BCC was found most often in the nasal region (n: 107, 31%) and least often in the mentum (n: 6, 0.2%) and the lips (n: 2, 0.05%). Of the 107 lesions located on the nose, 14 (13%) were on the left side; 23 (21%) on the right side; and the remaining 70 were located on the nasal tip, radix, and dorsum. Subgroup classification could only be made in 38 patients. Subtypes were mostly nodular (n: 27), followed by the infiltrative type (n: 6). Of the 63 patients with BCC on the cheeks, approximately half were located on the right side (n: 31) and half on the left side (n: 32). Of these patients, subtypes could be identified in only 26. Of 17 (27%) tumors identified, 4 (0.6%) were ulcer type. Forty-five (13%) patients had periorbital localization, of which 27 (60%) were left-sided and 18 (40%) were right-sided. Subtype identification could be made in 17 patients, with nodular being the most common type (n: 13, 28%), followed by the superficial type (n: 2, 0.4%).

Main Points:

- This study aimed to present the clinical and demographic features of patients who underwent skin cancer surgery at our center during the last 10 years
- This study showed that SCC was more common in men and located on the cheek, whereas MM was found to be more common on the scalp
- Residents of the Çukurova region, an eastern Mediterranean region, are exposed to high levels of sunlight.
- We believe that the difference in demographic and clinical features of skin cancers in this region may be due to high levels of sunlight.

Demographic Data of Patients with SCC

The patients diagnosed with SCC comprised 52 (58%) men and 47 (44%) women with a mean age of 72.12±12.80 years. These tumors were seen mostly in the seventh decade of life (Figure 3). The lesion was mostly seen on the cheek region (n.24, 25%) and least frequent in the frontal (n: 5, 0.5%) and periorbital region (n: 4, 0.4%). The tumors seen on the cheeks were on the right and left sides at equal rates. Of the lesions observed on the lips, 19 (86%) were located on the lower lip (Figure 4).

Demographic Data of Patients with BSCC

BSCC was extremely rare and diagnosed only in six patients. These lesions were located on the left cheek in four cases (66%), the nose and ear in one patient each (16%). Extensive data analysis could not be performed because of few cases.

Figure 1. Demographic features in basal cell carcinoma

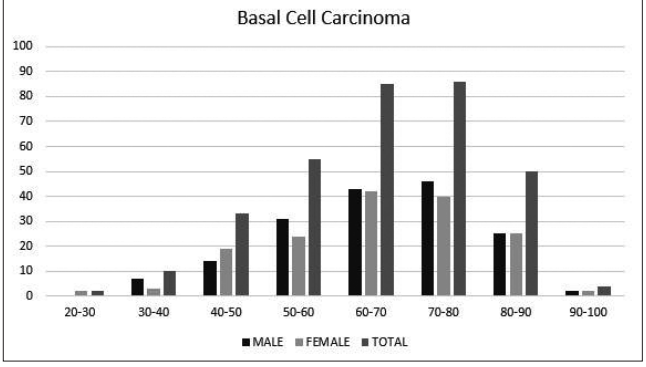


Figure 2. The localization of basal cell carcinoma lesions

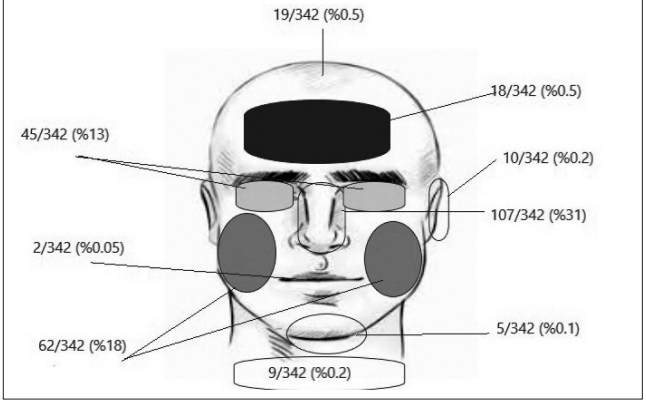


Figure 3. Demographic features in squamous cell carcinoma

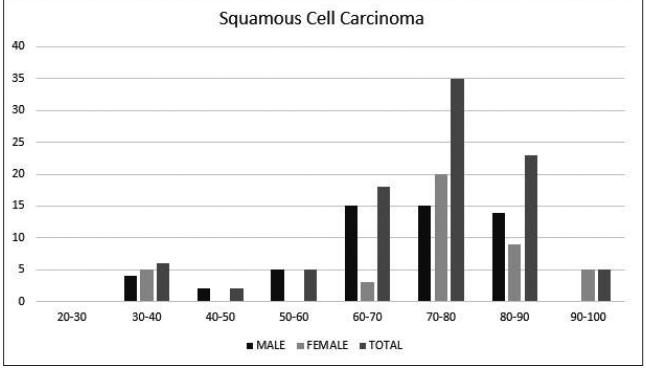
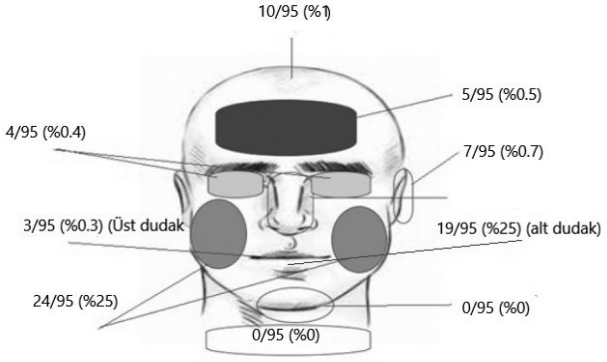


Figure 4. The localization of squamous cell carcinoma lesions



Demographic Data of Patients with MM

MM was diagnosed in eight patients, comprising 6 (75%) men and 2 (25%) women with a mean age of 73.8 years (range, 47–94 years). It was located in the scalp in 4 (50%) patients, on the cheek in 2 (25%, on the forehead in 1 (12.5%), and in the submandibular region in 1 (12.5%). Subtypes were observed most as nodular (n: 4, 50%) followed by lentigo maligna (n: 2, 25%). Extensive data analysis could not be performed because of few cases.

DISCUSSION

Sunlight and radiation are the two most important factors in the etiology of skin cancers. In addition, geographical region and advanced age are of significant importance in this etiology (6). With the implementation of the Cancer Monitoring System in Turkey in 2003 and the clear determination of early diagnostic criteria, the real incidence of the disease has been revealed. Thus, the disease can be diagnosed early before metastasis. Moreover, there has been a reduction in the incidence of mortality caused by diseases such as melanoma. However, there are very few epidemiological studies on skin cancer in Turkey.

Findik et al. (5) analyzed the demographic data of 400 patients who presented with NMSC at Konya Meram University Medical Faculty Hospital. The most frequent tumor was BCC (263 patients, 65%) located most frequently in the nasal region (82 patients, 31%). These results overlap with the findings of tumors seen in the current study region. In the same study by Findik et al, SCC cases accounted for 28% (114 cases). Lesions were located most often in the lower lip, eye region, and extremities and were more often seen in women (5). However, in our study, they were seen more in men, and most often found on the cheek. These data were not consistent with the findings of previous studies (5, 6). As the Çukurova region is in the eastern Mediterranean region of Turkey, it is exposed to more sunlight for most of the year because of the geographical characteristics and its proximity to the equator. In addition, the geographical conditions and employment in agriculture may explain the sex-related difference. The same reasons could explain the difference in the localization of the lesions. As there were very few MM and BSCC tumors in our study, detailed data analysis could not be performed.

The results in the current study are supported by the findings of other studies in Turkey (5, 7). MM subtypes show different responses with UV exposure. The vast majority of lentigo Malign Melanoma (LMM) are seen in white-skinned individuals with a tendency to actinic damage and long-term exposure to intense sunlight. The cumulative dose of UV light to which a person is exposed throughout life is thought to play a role in the formation of LMM (8). Nodular malignant melanoma (NMM) is seen in relatively younger patients, and exposure to intermittent but severe UV light at an early age plays a role in its development (8). The frequent observation of NMM in the Çukurova region can be explained by exposure to intermittent but intense UV light due to the geography and climate. However, the low number of cases in this study prevented the presentation of a detailed view. The results of the current study are consistent with those reported by other studies on MM in Turkey and throughout the world (9).

This study's limitations included its retrospective design, the absence of histological subgroup analysis, and the low sample size of the BCC and MM groups.

CONCLUSION

In conclusion, just as the demographic data of skin cancer cases vary from country to country, a difference may also be seen from region to region. When it is considered that except for MM, the diagnosis of skin cancer is generally made according to clinical data, studies such as ours can provide information that can be of guidance in early diagnosis. More studies with a larger number of cases and longer follow-up periods are recommended.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Adana City Training and Research Hospital. / (2019/550)

Informed Consent: Informed consent was obtained from patients who participated in this study.

Peer-review: Externally peer-reviewed.

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Conflict of Interest: The authors have no conflicts of interest to declare.

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