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RESEARCH

INVESTIGATION OF SKIN CANCER IN THE GERIATRIC AGE GROUP

ABSTRACT

Introduction: With the increase in lifespan, age related diseases including cancer also increase. With this in mind, in our study we evaluated treatment methods and results of patients who were older than age 65 and operated for skin cancer in the Plastic Surgery Clinic.

Material and Method: Patients older than age 65 who were operated between 2010 and 2014 for skin cancer in the Department of Plastic Surgery were included in our study. Age, gender, diagnosis, localization, operation, lymph node dissection and additional treatments were analysed.

Results: 91 geriatric patients with skin cancer were detected. The average age of patients was 74.4 years. 47 (51.65%) patients were female; 44 patients (48.35 %) were male. With respect to diagnosis, 58 (63.74%) had basal cell carcinoma, 27 (29.67%) had squamous cell carcinoma, and in 6 (6.59%) patients cutaneous melanoma was detected. A review of surgical operations showed that 22 (24.17%) patients had lesion excision + primary suturation, 19 (20.88%) had lesion excision + graft repair, 48 (52.75%) had lesion excision + local flap repair, and 2 (2.20%) had amputation.

Conclusion: In recent years, skin cancer, especially the incidence and mortality of cutaneous melanoma, has been seen more frequently in elders, compared to younger patients. In health controls, the mortality of skin cancer may be reduced by taking into account the geriatric age group.

Key Words: Geriatrics; Aging; Carcinoma, Basal Cell; Carcinoma, Squamous Cell; Melanoma.

ARAŞTIRMA

GERİATRİK YAŞ GRUBUNDA CİLT KANSERİ OLGULARININ İRDELENMESİ

ÖZ

Giriş: Yaşam süresindeki artışla birlikte yaşla ilişkili hastalıklar, bunların içinde kanserde olacak şekilde artmaktadır. Çalışmamızda bu amaçla Plastik Cerrahi servisinde cilt kanseri nedeniyle ameliyat edilen 65 yaş üstü hastaların tedavi yöntemleri ve sonuçları değerlendirildi.

Gereç ve Yöntem: Çalışmaya 2010-2014 yılları arasında Plastik Cerrahi Anabilim Dalı'nda cilt kanseri nedeniyle ameliyat edilen 65 yaş üstü hastalar dahil edildi. Hastaların, yaşları, cinsiyetleri, tanıları, lokalizasyonu, yapılan işlemler, lenf nodu diseksiyonları ve verilen ek tedaviler sınıflandırıldı.

Bulgular: 91 cilt kanserli geriatrik hasta olduğu tespit edildi. Hastaların yaş ortalaması 74,4 olarak bulundu. Hastaların 47 (51,65%)'si kadın, 44 (48,35%) erkek idi. Hastaların tanıları incelendiğinde 58 (63,74%) hastada bazal hücreli karsinom, 27 (29,67%) hastada skuamöz hücreli karsinom ve 6 (6,59%) hastada kutanöz melanoma olduğu saptandı. Yapılan cerrahi işlemler incelendiğinde 22 (24,17%) hastada lezyon eksizyonu + primer sütürasyon, 19 (20,88%) hastada lezyon eksizyonu + greftle onarım, 48 (%52,75) hastada lezyon eksizyonu + lokal fleple onarım, 2 (2,20%) hastada ampütasyon yapıldı.

Sonuç: Yaşlılarda cilt kanseri özellikle kutanöz melanoma insidans ve mortalitesi son yıllarda genç hastalardan daha fazla artmıştır. Sağlık kontrollerinde geriatrik yaş grubuna dikkat edilerek cilt kanserleri ile ilgili mortalite azaltılabilir.

Anahtar Sözcükler: Geriatri; Yaşlanma; Karsinom, Bazal Hücreli; Karsinom, Skuamöz Hücreli; Melanom.

INTRODUCTION

At the present time, as a result of the benefits of modern medicine, there is an apparent increase in lifespan. As a result, the proportion and life expectancy of the elder population are increasing (1-4). Elderly people want to enjoy their life to the full by taking an active part in a social life and professional projects within some fields (4). Census data indicates that in future years, the number of people within the geriatric age group will increase substantially. The fastest growing part of this population is composed of people over 85 years old (5).

Together with the increase in lifespan, age related diseases including cancer also increase (2,6,7). In geriatric patients, the prevalence of skin problems is very high. This rate may reach 65%, and as people grew older multiple skin problems are observed. Epidemiological studies performed on the elderly population may help to guide in planning for the health care which will be given to these older patients (8).

With this aim, in our study, patients who were older than age 65 and operated for skin cancer in the last 4 years in the Plastic Surgery Clinic were evaluated treatment methods and results of patients.

MATERIALS AND METHOD

Patients older than age 65, who were operated for skin cancer between 2010 and 2014 in the Department of Plastic Surgery, were included in our study. It was a retrospective study. Age, gender, diagnosis, localization, operation, lymph node dissection and additional treatments of patients were retrospective analysed from the medical records of patients. The study protocol was carried out in accordance with the Declaration of Helsinki and was approved by the Ethical Committee of the Faculty of Medicine of Yüzüncü Yıl University.

RESULTS

As a result of screening tests, 91 geriatric patients with skin cancer were detected. The age range of patients was 65-94, and the average age was found to be 74.4. 47 (51.65%) patients were female; 44 patients (48.35%) were male. When diagnoses of patients were examined, we found that 58 (63.74%) patients had basal cell carcinoma, 27 (29.67%) of patients had squamous cell carcinoma and 6 (6.59%) had cutaneous melanoma. The localization of lesions is presented in Table 1. When surgical operations were examined, 22 (24.17%) patients had lesion excision + primary saturation, 19 (20.88%) patients had lesion excision + graft repair, 48 (52.75%) patients had lesion excision + local flap repair, and 2 (2.20%) had amputation (Table 2). When additional therapies applied due to cancer were examined, 4 patients (4.39%) with squamous cell carcinoma had radiotherapy, while 2 patients (2.19%) with squamous cell carcinoma and 2 patients (2.19%) with cutaneous melanoma had chemotherapy.

Table 1— Localization of Lesions

	Basal Cell Carcinoma	Squamous Cell Carcinoma	Cutaneous Melanoma
Medial canthal region	7	1	
Lateral canthal region	1		
Upper eyelid	1		
Lower eyelid	4	1	1
Malar region	8	5	
Nose	19	3	
Scalp	2	1	
Ear	3	4	
Forehead	3	1	
Eyebrow, temporal region	5	1	
Nasolabial sulcus	1	2	
Perioral region	2	2	
Body	1	1	
Upper extremity	1	5	
Lower extremity			5
Total	58	27	6

Table 2— Surgical Treatment Options.

	Lesion Excision + Primary Saturation	Lesion Excision + Graft Repair	Lesion Excision + Local Flap Repair	Amputation
Basal cell carcinoma		17	9	32
Squamous cell carcinoma	5	6	15	1
Cutaneous melanoma		4	1	1
Total	22	19	48	2

Discussion

Aging is not a standard process more or fewer physiological changes can emerge. There is heterogeneity among elders: each person should be considered separately (9). Elderly patients carry much more of the disease burden (10), with disproportional complication and mortality rates, because accompanying diseases and decreased physiological reserves are more common in this age group (11). The aging process affects all organ systems. Functional loss can occur in all cell types and organs (12). With lifelong effects of extrinsic injury and peripheral effects (like sun exposure), structural and physiological changes caused by the coexistence of the intrinsic effects of aging constitute an apparent sensitivity to dermatologic disorders (13). Skin problems that emerge with age are elasticity decline, fragility, dryness and vascular visibility. Wrinkles, actinic keratosis, solar elastosis, collagen injury, and sebaceous gland hypertrophy are seen due to sun exposure (14).

Skin cancer reflects the relation between age and ionising radiation (7). The frequency of skin cancer is higher in elderly patients, and frequently nonmelanoma skin cancers are observed. Along with the increase in life span of the population, this type of skin cancer has also increased. The modification of surgical treatment in elderly patients has raised some questions that we addressed in this study (7). Skin cancers are evaluated in 2 groups: Melanoma and Nonmelanoma cancers. The American Cancer Society recommends a cancer-related check-up, including skin examination, every three years in patients 20 to 40 years of age and yearly in patients older than 40 years. It also recommends that patients perform a skin self-examination monthly (15).

Nonmelanoma skin cancers include both basal cell carcinoma and squamous cell carcinoma. In general, 80% of skins cancers are observed to be basal cell carcinoma (BCC), and 20% are squamous cell carcinoma. BCC is the most frequent cancer type. Traditionally, cumulative sun exposure has been found to cause both basal cell carcinoma and squamous cell carcinoma (15,16). Basal cell carcinoma is seen in the head-neck region at the rate of 86%, and in the body and extremities at the rate of 7% (16). BCC has 5 major histopathological patterns: nodular (21%), superficial (17%), micronodular (15%), infiltrative (7%) and morpheaform (1%). The mixed pattern includes 2 or more histological patterns. It comprises approximately 40% of cases (15). Electrodesiccation, curettage, cryotherapy, topical imiquimod or fluorouracil use, surgical excision and radiotherapy are used as therapies (15,16). Posttreatment recurrence risk depends on multiple factors such as localization, size, histological subtype, age, gender, immune status and patient affect (15). Mohs micrographic surgery reduces the recurrence rate. For example, in elderly patients for whom radiotherapy excision is not possible, it may be applied because of the high risk in large lesions and the accompanying comorbid medical status. At the same time, it may be used in nonmelanoma skin cancers, large tumors in which complete excision cannot be carried out, or in high metastasis risk situations (16). In our study, the majority of cases, compatible with the literature, consist of 63.74% (58 patients) with basal cell carcinoma. Almost all cases (except for 2) were found within the head-neck region, most frequently in the nose (Figure 1). Surgical excision was the preferred treatment in all cases. 17 (18.68%) patients had lesion excision + primary saturation, 9 (9.89%) patients had lesion excision + graft repair, 32 (35.16%) patients had lesion excision + local flap repair. No additional treatment was required, and there has been no recurrence.

Squamous cell carcinoma most frequently is seen in the face, hand and forearm. Actinic keratosis squamous cell carcinoma is the precursor lesion (16). Neoplastic transformation of epidermal keratinosis is triggered by UV (15). Other major risk factors include chronic disease or injured skin (ulcer, sinus, tracts), exposure to UV, radiation, immunosuppression and xeroderma pigmentosa (15,17).

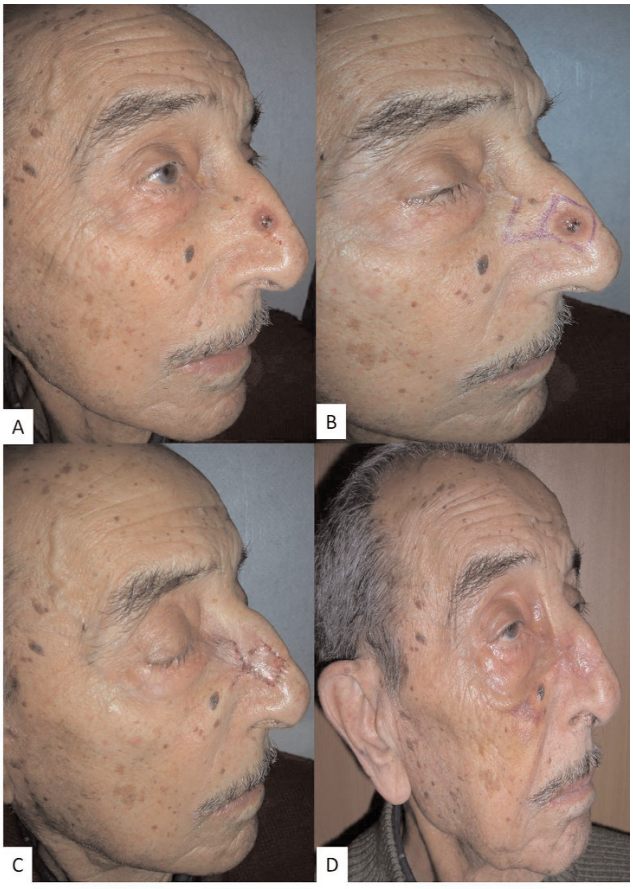

Figure 1— (A) Preoperative appearance of basal cell carcinoma on the nose. **(B)** Appearance of the preoperative planning. **(C)** Postoperative appearance of the early result after flap repair. **(D)** Postoperative appearance of the late result.

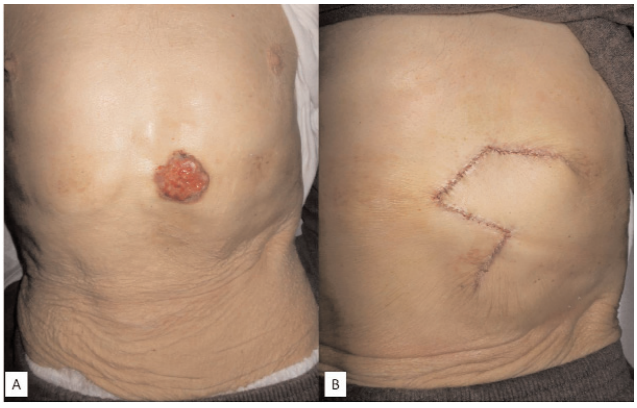

Figure 2— (A) Preoperative appearance of squamous cell carcinoma on the body. **(B)** Postoperative appearance of the early result after flap repair.

Figure 3— (A) Preoperative appearance of cutaneous melanoma on the right foot. **(B)** Postoperative appearance of late result after repair: split thickness skin graft.

Squamous cell carcinoma involves local infiltration and expansion. In 5% of cases, distant metastasis develops through hematogeneous spread. Electrodesiccation, curettage or cryotherapy are used in small, low risk lesions. Mohs micrographic surgery is the first choice of treatment. SCC is unique in relation to radiotherapy; this treatment is used in high risk areas, where surgery might be difficult to accomplish (15). Squamous cell carcinoma was detected in 29.67% (27) of our patients. While 21 lesions were observed in the head-neck region (Figure 2), 6 lesions were observed in the body and extremities. Surgical excision was the preferred treatment in all cases and lymph node dissection was not carried out. 5 (5.49%) patients had lesion excision + primary saturation, 6 (6.59%) patients had lesion excision + graft repair, 15 (16.48%) patients had lesion excision + local flap repair and 1 (1.09%) patient had amputation. In 4 patients, besides surgical treatment, radiotherapy was applied, and in 2 patients chemotherapy was added to the treatment.

Among the patients with cutaneous melanoma, the most important group consisted of patients aged 65 and older (1). In America and Europe, especially in the geriatric age group, melanoma has been increasing and in this new century it will become an important public health problem. The incidence of cutaneous melanoma among patients over 65 years of age has increased 10 times more than the incidence among patients under 40 (1). Cutaneous melanoma is characterized by lower survival in elderly patients. This is attributed to age-related

weak prognostic factors (1,18). As people grow older, Breslow thickness, incidence of ulceration and regression, and the proportion of male patients increase. All of these are weak prognostic factors. Another cause of mortality in elderly patients is an ageing immune system. As people grow older, immune system function decreases and as a result its capacity to fight against infection and malignancy decreases; in addition, atrophy in skin lymphatics contributes to a decrease in immune response (1).

Elderly people are less observant of their own skin changes; they examine themselves less frequently. Compared to young people, they participate in skin cancer screening programs less frequently (1). They pay less attention to early symptoms; therefore they are at risk for the progression of the disease (1). In elderly patients, more ulceration and bleeding are observed; this situation indicates that the lesion has progressed (1,19). Hanrahan et al. (20) suggest that lentigo maligna melanoma increases in elder patients due to its late presentation, because this histological type shows slow progress over a long term. The increased rate of nodular melanoma in elderly patients may be due to the difficulty in receiving an early diagnosis (1,19). Nodular melanoma shows rapid progress and early symptoms and signs of melanoma are often missed. The diagnosis of nodular melanoma is complex, and recognition of the clinical parameters is difficult. As it shows rapid progress, it becomes difficult to establish an early diagnosis (1).

An excisional biopsy ensures a definitive diagnosis that is preferred for surgical excision of the primary melanoma (1,2,21). An incisional and punch biopsy might be preferred in elderly patients in some cases, such as large pigmented lesions; however, as it includes only a small part of the lesion it makes diagnosis difficult for the pathologist (1). In melanoma, the excision border depends on tumor thickness and does not affect general survival; however, it is important in the determination of local recurrence risk (1). Radiotherapy is used in cases that are not appropriate for surgery, with a relatively low risk for recurrence. A sentinel lymph node biopsy ensures evaluation of regional node status and in general it is advised if the tumor thickness is more than 1 mm (1,21). Although mortality caused by melanoma increases, there are fewer positive lymph nodes in elderly patients (1). Complete lymph node dissection is advised after a positive sentinel lymph node biopsy.

In general, interferon treatment is preferred in patients with no accompanying serious disorder and who are expected to be monitored for more than 10 years. Side effects of interferon treatment in elderly patients cannot be tolerated. Therefore, its risks and benefits should be carefully evaluated in patients over age 75 (1). In inoperable in-transit or satellite skin metastasis, isolated extremity perfusion with melphalan (which may be combined with tumor necrosis factor alpha) can be used. It eliminates macroscopic disorder in more than 50% of patients; therefore, the requirements for amputation palliative care disappear. Toxicity and its complications are similar to those of a younger patient group; age is not a contraindication (1).

In our study, cutaneous melanoma was observed in 6 (6.59%) of our patients: 2 females and 4 males. While 1 of the lesions was in the face region, 5 lesions were detected in a lower extremity. Excision flap repair was preferred for 1 (1.09%) lesion in the face; excision graft repair was preferred for 4 (4.39%) lesions in lower extremities (Figure 3) and finger amputation was preferred for 1 (1.09%) lesion. In a cutaneous melanoma case in a foot, as the sentinel lymph node biopsy was positive, inguinal lymph node dissection was added to the treatment. In 2 cases with cutaneous melanoma, chemotherapy was applied in addition to surgical treatment.

To sum up, progress can be characterized by a rapid increase in the number of elderly groups within the population. The relationship between skin cancers and age and cumulative sun exposure is known. In relation to this, in recent years skin cancer, especially cutaneous melanoma incidence and mortality, has increased more in the elderly than in younger patients. The overall survival rate is lower in elderly patients; often a diagnosis is established late due to weak prognostic features. In order to establish an early diagnosis, check-up programs that include skin cancer screening tests should be taken into account. In particular, monitoring of elderly patients who cannot carry out their own inspections completely should be made at certain intervals. We think can be provided increasing the survival rate in all cases with early diagnosis and appropriate surgery treatment.

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