Original Article

Frequency and Characteristics of Cutaneous Malignancies Diagnosed at Services Hospital, Lahore

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Objective: To determine the frequency and characteristics of cutaneous malignancies in patients presenting at SHL from June 2014 to 2017 to estimate the burden of disease in our set up.

Methods: Forty four patients of cutaneous malignancies were included in this study conducted at SHL. The demographic details and the features of malignant lesions were noted including site, size, number, duration, rate of growth, secondary features, skin type, associations, any pre malignant lesion, family history of similar or any other cancer and hours of sun exposure. Relevant systemic examination and appropriate investigations were done to detect the distant metastasis. Skin biopsy was taken in all patients.

Results: The mean age of the patients was 59.9 ± 7 years. Males were 28 (64%) and females were 16 (36%). Rate of growth was slow in most of the patients. Mean duration of symptoms was 6 months to 2 years. There was statistically significant higher sun exposure in male outdoor workers as compared to indoor workers (P value being 0.000). Majority of the patients had lesions on face. Most of the patients had a solitary lesion. Actinic keratosis was present in 9 patients. Majority of the patients were of skin type IV. Secondary features were present in 32 patients. Associated diseases were noted in 7 patients. History of similar cancer in family was noted in 4 patients. Basal Cell Carcinoma (BCC) was the most common malignancy, 20 (46%) followed by Squamous Cell Carcinoma (SCC), 13 (30%). Remaining 11 (25%) cases constituted Mycosis Fungoides (3), Basisquamous carcinoma (2), Malignant Melanoma (1), Kaposi Sarcoma (1), Dermatofibrosarcoma Protuberance (1), Bowens Disease (1), B Cell Lymphoma (1) and cutaneous metastasis of internal malignancy (1).

Conclusions: The commonest cutaneous malignancy was found to be BCC, followed by SCC. The early diagnosis and prompt treatment can reduce the morbidity and mortality associated with these malignancies.

Keywords: cutaneous malignancy, basal cell carcinoma, eumelanin, ultraviolet light.

Introduction

Skin cancer is the most common cancer in Caucasians, representing 20-30% of all malignancies.[1] Its incidence is 2-4% in Orientals and 1-2% of all cancers in Africans and Indians.[2] Highest incidence is reported in Australia (1000/100,000 per year).[1] In Pakistan, incidence of skin cancer is 1% of all cancers reported at cancer registry.[3] Incidence is increasing due to increased recreational exposure to ultraviolet light.[4] There is lower incidence in Asians due to protective effect of melanin. Accurate estimate of incidence is difficult to obtain as all cases are not reported to cancer registry.[3]

Cutaneous malignancies include primary and metastatic tumors involving skin and its appendages.[5] The three most frequent primary skin cancers are basal cell carcinoma (BCC), squamous cell carcinoma (SCC) and malignant melanoma (MM). The first two are known as nonmelanoma skin cancer (NMSC). BCC arises from basal cells and it grows slowly. It is an invasive, rarely metastasizing skin tumour. Predisposing factors are excessive exposure to sunlight and chemical carcinogens. It can occur in the scars of 2nd and 3rd degree burns.[6-10] Genetic predisposition also plays an important role.[11,12] Other risk factors include arsenic, coal tar, chimney smoke, chronic skin irritation, chronic inflammation, xeroderma pigmentosum, and basal cell nevus syndrome.[5]

The cells of origin of SCC are epidermal keratinocytes. It is mostly a disease of white people. The most common sites for SCC are sun exposed areas i.e. on the back of the hands & forearms, the upper part of the face, on the lower lip and pinna. Other risk factors are chronic exposure to thermal radiation and chronic scarring. Radiant heat from coal and peat fires may cause SCC in women who habitually sit with their legs close to the fire. It grows faster than BCC.[5]

MM arises from melanocytes. It is highly prevalent in Australia, New Zealand, North America and Europe.

Common sites include face, trunk, extremities and mucosal areas. It carries a high potential of metastasis.[5]

The exact population-based data of Pakistan regarding frequency and characteristics of cutaneous malignancies is not available. Keeping this in view the present study was designed to search the frequency of cutaneous malignancies presenting to Department of Dermatology, Services Hospital Lahore.

Methods

This hospital based cross sectional study was carried out at Services Hospital Lahore, over a period of 3-years, from June 2014- June 2017. Fifty patients of any age and both genders, with a clinical diagnosis of malignant lesion were enrolled for study. An informed consent was sought from patients after due explanation of the purpose. The study was approved by institutional ethical committee. History included bio-data of patient (name, age, gender, address & occupation), the age of onset, duration, evolution of the disease, history of exposure to sunlight, rate of growth, skin type, associations, any pre malignant lesion and family history of similar or any other cancer. Patients were assessed clinically and the features noted included, type of malignancy, site, size, number, extension, surface, depth, base and secondary features e.g. oozing, bleeding, crusting, pain, colour and texture of surrounding skin and secondary infection. A thorough systemic examination was conducted to diagnose these conditions and to confirm the presence of systemic metastasis. Biopsy was done to confirm the type of malignancy. All data were entered into a proforma.

Results

Out of 50 patients studied, 44 were found to have biopsy proven skin malignancy. Males were 28 (64%) and females were 16 (36%) showing M:F ratio of 1.85: 1. Mean age of patient was 59.9 ±7 years (age range 15-85 years). Face was involved in 31 (70%) of patients. Mean duration of symptoms was 6 months to 2 years. Male outdoor workers were more 21 (75%) than indoor workers 7 (25 %). Statistically significant higher sun exposure was observed in male outdoor workers (P value being 0.000). Most of the patients, 36 (82%) had a solitary lesion. Multiple lesions were present in 8 (18%) patients. These were seen in patients of Xeroderma Pigmentosum, Albinism, AIDS and cutaneous metastasis. Actinic keratosis was present in 9 out of 13 patients of SCC. Majority of the patients, 36 (82%) were of skin type IV. Secondary features, like oozing, bleeding, pain and secondary infections, were present in 32 (73%) patients. Associated diseases, like Xeroderma Pigmentosum (4), Albinism (1), AIDS (1) and internal malignancy (1) were noted in 7 (16%) patients.

Table-1: Different type of tumours seen (n=44).

Tumor Types	N (%)
Basal cell carcinoma (BCC)	20 (46%)
Squamous cell carcinoma (SCC)	13 (30%)
Mycosis fungoides (MF)	3 (7%)
Basisquamous carcinoma	2 (5%)
Malignant Melanoma	1 (2%)
Kaposi Sarcoma	1 (2%)
Dermatofirosarcoma protuberance	1 (2%)
Bowens Disease	1 (2%)
B Cell Lymphoma	1 (2%)
Cutt metastasis of internal maligancy	1 (2%)

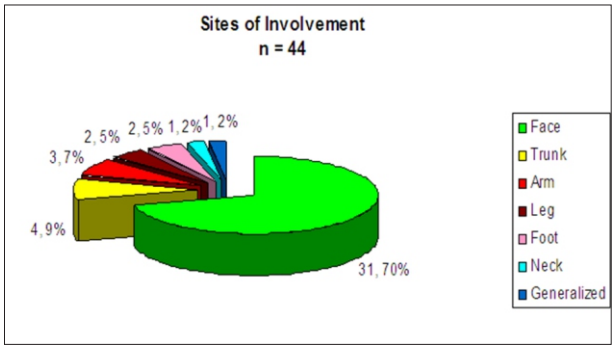

Fig-1: Site of involvement n=44.

Table-2: Characteristics of cutaneous malignancies.

Characteristics of cutaneous malignancies	N (%)
Actinic keratosis	9 (20%)
Skin type-IV	36 (82%)
Secondary features	32 (73%)
Associations	6 (14%)
Family h/o similar cancer	4 (9%)
Systemic involvement	5 (11%)

History of similar cancers in family was noted in 4 (9%) patients of Xeroderma Pigmentosum. Systemic involvement was seen in 5 (11%). The different types of tumours observed in the study are shown in Table 1. BCC was the commonest skin tumour seen in 20 (46%) of cases followed by SCC in 13 (30%).

Discussion

Skin cancer is less common in people of dark skin (Fitzpatrick type III & IV) due to the protective effect of melanin, but is often associated with greater morbidity and mortality.[13] A rising incidence of cutaneous malignancies has been observed internationally. For example, in Australia, the non melanoma skin cancers have shown an alarming increase in the last two decades. BCC has increased by 19% and SCC by 93% between 1985 and 1995. Increase in the UV light exposure is considered to be the most important etiological factor.[1]

In our study 28 (64%) were males and 16 (36%) were females showing M:F ratio of 1.85: 1. Similar results were seen in studies by Paracha et al.[2] by Ahmed et al.[3] and by Baloch et al.[14] BCC was the most common and the least lethal form of all skin cancers. It occurs most frequently in people over 50 years of age and almost twice as often in men as in women.[15] Mean age of patient was 59.9 ±7 years (age range 15-85 years). Eldest patient was 85 years old and youngest was 15 years old. These results are comparable with other studies.[2,3,14] Face was involved in 32 (73%) of patients. Face was the highest affected site (71%), a fact supported by studies conducted by Ejaz et a. [16] and by Paracha et al.[2] Another study from Lahore in 1999 by Mansoor et al.[17] showed that the commonest sites were head and neck region. Mean duration of symptoms was six months to 2 years. Similar results were seen by Soomro FR et al.[5] and Ahmed M.[6] Male outdoor workers were more 21 (75%) than indoor workers 7 (25 %). Statistically significant higher sun exposure was observed in male outdoor workers (P value being 0.000). Comparable results were found in many local studies.[3]

A study from Lahore in 1999 by Mansoor et al [17] showed the maximum age of presentation was 90 years with mean age of 47 years. Most of these patients were males (47%) and farmers by occupation. Prolonged exposure to sun rays followed by trauma and burn scars were among the common etiological factors. This is also supported by a study conducted in Lahore by Shaharyar et al. [18] and a study in India by Kumar .[19]

BCC was the commonest skin tumour seen in 20 (46%) of cases followed by SCC in 13 (30%). Comparable results were found in a study done by Paracha et al.[2] and Farooq .[5] Similar analysis has been reported by Baloch et al.[14],by Ahmed [3], by Mansoor et al.[17] and by Yasmeen et al.[20] In a study in Germany (2008-10), it was concluded that the most common histological type of NMSC was BCC, followed by SCC.[21] A study in Iran (1996-2006) showed BCC was the most common skin cancer and SCC is the second one.[4] In our study SCC was found in 13 (30%) cases that are supported by study conducted by Ayesha et al.[3]

Mycosis fungoides was seen in 3 (7%) cases. Similar results were seen in study by Paracha et al. in 2013 in Peshawar.[2] The incidence of MM is rising rapidly in all parts of the world. It is gaining importance because of increasing incidence and hence morbidity and mortality[5] but our study showed 1 (2%) case of Acral Lentigenous Melanoma. This is due to the fact that Malignant Melanoma is rarely encountered in coloured skin with increased melanin pigment unlike in the western world where it is the commonest skin cancer.[21] The largest study of skin cancer in Pakistan by Mansoor et al.[17] reported an incidence of 1.2% in their series. Similar results were seen in studies by Ayesha et al [3] and Dilnawaz.[22]

Conclusion

The commonest cutaneous malignancy was BCC followed by SCC. Early diagnosis & prompt treatment can reduce the morbidity & mortality associated with these malignancies. The increasing incidence of cutaneous malignant tumours with high mortality rate shows an alarming situation for our population. Increasing skin cancer burden need to introduce training programmes for general practitioners for early referral to specialized health care centers for effective management of cutaneous malignancies.

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