

## Original Article

# Cutaneous malignant tumors: a profile of ten years at LINAR, Larkana-Pakistan

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**Abstract** *Background* Malignant tumors of skin are a group of malignancies comprising primary and metastatic tumors which involve the skin and its appendages.

*Patients and methods* In this observational study, a total of 300 cases of cutaneous malignant tumors were included, who visited the Larkana Institute of Nuclear Medicine and Radiotherapy (LINAR) for management after confirmation by histopathological examination.

*Results* Out of 300 cases studied, the males were 195 (65%) and females were 105 (35%), showing M: F ratio of 1.85: 1. The mean age of affected cases was  $47 \pm 7.694$  years and mostly affected patients were farmers (47%). The duration of symptoms in majority of cases (27%) was 3-6 months. Most of the patients (71%) had lesions on face, while other parts of body like extremities, scalp and trunk were involved in 13%, 9% and 7%, respectively. Basal cell carcinoma (BCC) was confirmed in 183 (61%) cases, while squamous cell carcinoma (SCC) and malignant melanoma (MM) were found in 96 (32%) and 21 (7%) cases, respectively.

*Conclusion* BCC was found to be the commonest morphological type amongst the cutaneous malignant tumors. The increasing incidence rate shows an alarming situation for our population. The unawareness of public and medical professionals about the disease and late diagnosis are contributing factors in high morbidity and mortality.

### *Key words*

Malignant tumours, cutaneous, basal cell carcinoma, squamous cell carcinoma.

## Introduction

Skin cancers comprise a group of malignancies which include primary and metastatic tumors involving skin and its appendages. The various skin malignancies include basal cell carcinoma (BCC), squamous cell carcinoma (SCC), malignant melanoma (MM) etc.

BCC has its multiple identities like epithelioma, basiloma, Jacob's ulcer, rodent ulcer and Krompektor's tumor. BCC is leading carcinoma of skin, an invasive, rarely metastasizing, stroma-dependent tumor whose epithelial component is derived from pleuripotent epidermal cells and mesodermal component is specific and integral for tumor development. Excessive exposure to sunlight, chemical carcinogens and heat are predisposing factors. BCC occurs in the scars, secondary to 2<sup>nd</sup> and 3<sup>rd</sup> degree burns.<sup>1-4</sup> Genetic predisposition also plays an important role in the development of BCC<sup>5,6</sup>. Other risk factors include arsenic, coal

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tar, chimney smoke, chronic skin irritation, chronic inflammation, xeroderma pigmentosum, and basal cell nevus syndrome.

SCC arises from the epidermal keratinocytes. It is predominantly a disease of white people. The most common sites for SCC are those most exposed to the sun. They occur on the backs of the hands and forearms, the upper part of the face and, especially in males, on the lower lip and pinna. Other factors implicated include 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.

MM arises from cutaneous melanocytes. It is highly prevalent in Australia, New Zealand, North America and Europe. Common sites include face, trunk, extremities and mucosal areas. It presents with different morphological forms like superficial spreading, nodular, amelanotic and mucosal. It carries a high potential of metastasis.

The exact population-based data of Pakistan regarding cutaneous malignancies are not available. Keeping this in view the present study was designed to search the available data at LINAR which shows 5% of all new cancer patients suffering from skin cancer.

### **Patients and methods**

This observational study was carried out at Larkana Institute of Nuclear Medicine & Radiotherapy (LINAR) with collaboration of Department of Pathology, Chandka Medical College, Larkana, Sindh, over 10-year period (1991-2000).

Male and female patients aged above 12 years, with a clinical diagnosis of malignant lesion were enrolled for study. Only cases of primary skin cancers were included which constituted 5% of all new cancers at LINAR.

An informed consent was sought from patients after due explanation of the purpose. The study was approved by local ethical committee. Sample size was calculated by statistical prevalence formula.

History included biodata of patient (name, age, address, and occupation), the age of onset, duration, and evolution of their disease. The history of exposure to sunlight, with total life time duration of exposure, total time of exposure per day and hours of exposure were elucidated.

Patients were assessed clinically every time by oncologist and dermatologist. The features of malignant lesions noted include: type of malignancy, exact location, number, extension, surface, depth, base and secondary features e.g. ooze, pain, state of surrounding skin. A thorough systemic examination was conducted every time by the same qualified physician to confirm the presence of systemic metastasis.

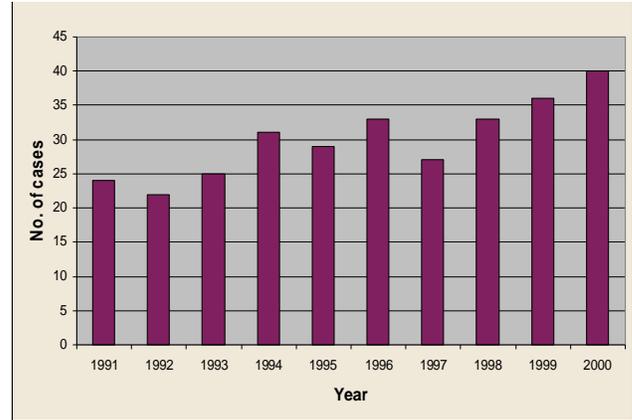
Biopsy was done to confirm the type of malignancy and assess the extent of underlying tissue involvement. For this purpose an elliptical wedge of tissue including small area of normal skin was taken and submitted to laboratory for histopathological examination. All data were entered into a pre-structured, close-ended pro forma.

**Results**

Out of 300 patients studied 195 (65%) were males and 105 (35%) were females showing M: F ratio of 1.85: 1. Mean age of patient was 47 ± 7.69 years. The year wise distribution of affected cases is shown in **Figure 1**. The different types of tumours observed in the study are shown in **Table 1**. BCC was the commonest skin tumour seen in 61% of cases. The occupation of affected patients and disease characteristic is shown in **Table 2**. The spread of tumour involving the regional lymph nodes and distant metastasis is shown in **Table 3**

**Discussion**

In this observational study, 300 cases of skin tumors were observed at Larkana Institute of Nuclear Medicine and Radiotherapy during a period of ten years (1991-2000). Results showed that the basal cell carcinoma was the most prevalent skin cancer (61%) in the analyzed population. Similar analysis has been reported by Baloch *et al.*<sup>7</sup> in 2000 from Larkana. Face was the highest affected site (71%), a fact supported by another study conducted by Ejaz *et al.*<sup>8</sup> at Combined Military Hospital, Kharian in 2006. Another study from Lahore in 1999 by Mansoor *et al.*<sup>9</sup> showed that BCC was the most common morphological type and the commonest sites were head and neck regions which also supports our study. 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 by Shaharyar *et al.*<sup>10</sup> in 1998 at Lahore. BCC was the most common and the least lethal form of all skin cancers. The estimated life time risk of BCC in



**Figure 1** Year-wise distribution of cases from 1991 to 2000.

**Table 1** Different types of tumours seen (n=300).

Tumor types	N (%)
Basal cell carcinoma	183 (61)
Squamous cell carcinoma	96 (32)
Malignant melanoma	21 (7)

**Table 2** Occupations and disease characteristics (n=300)

	N (%)
<i>Professions</i>	
Farmers	141 (47)
Laborers	87 (29)
Landlords	9 (3)
Indoor office workers	12 (4)
Housewives	21 (7)
Others	30 (10)
<i>Duration of symptoms</i>	
< 3 months	27 (9)
3-6 months	81 (27)
6 month- 1 year-	141 (47)
> 1 year	51 (17)
<i>Site of lesions</i>	
Face	213 (71)
Extremities	39 (13)
Scalp	27 (9)
Trunk	21 (7)

**Table 3** Regional lymph nodes involvement and distant metastasis (n=300).

Type of tumour	Regional lymph node involvement N (%)	Distant metastasis N (%)
Basal cell carcinoma	-	-
Squamous cell carcino	36 (12)	2 (0.7)
Malignant melanoma	14 (4.7)	7 (2.3)

white population is 33-39% in men and 23-28% in women.<sup>11</sup> It occurs most frequently in people

over 50 years of age and almost twice as often in men as in women.<sup>12</sup> Another study conducted by Yasmeen *et al.*<sup>13</sup> at Jinnah Postgraduate Medical Center, Karachi in 2002 also supports our study that BCC was the most common among skin tumors and the important predisposing factors were prolonged exposure to sunlight, chronic skin diseases and scars.

A high proportion of SCC arises in sun-damaged skin. Others may develop in scar tissue and stasis ulcers. Chronic heat exposure and certain chemicals like arsenic also predisposes to SCC. In our study SCC was found in 32% cases that are supported by study conducted by Ayesha *et al.*<sup>14</sup> at Ayub Medical College Abbottabad from 1995-2003.

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. Our study shows 7% cases of MM. Similar result has been reported by Ayesha *et al.*<sup>14</sup> and Dilnawaz *et al.*<sup>15</sup>

## Conclusion

The increasing incidence of cutaneous malignant tumours with high mortality rate (9%) shows an alarming situation for our population. Unawareness of public and medical professionals about the disease and late diagnosis and prolonged exposure to sunrays are common contributing factors.

## References

1. Curry MC. Giant basal cell carcinoma. *Arch Dermatol* 1977; **113**: 316-19.
2. Gaughan LG. Giant basal cell epithelioma in acute burn site. *Arch Dermatol* 1978; **99**: 594.
3. Gonclaves J C. A malignant change in smallpox vaccination scar. *Arch Dermatol* 1966; **93**: 229.
4. Ciblin I. Malignant Degeneration in a burn scar. *Ann Surg* 1965; **162**: 291.
5. Oettle AG. Rodent ulcer in identical twins. *Arch Dermatol* 1956; **74**: 167.
6. Burgess GH, Jager BV. Basal cell epithelioma. In: Helm F, ed. *Cancer Dermatology*. Philadelphia: Lea & Febiger; 1979. P. 91.
7. Baloch Q, Siyal AR, Abbasi S. Pattern of malignant tumors of skin at Larkana. *J Coll Physicians Surg Pak* 2000; **10**: 155-7.
8. Ejaz A, Aurangzeb, Awan ZA. Basal cell carcinoma involving the skin of breast? A rare site. *J Pak Assoc Dermatol* 2006; **16**: 49-51.
9. Mansourai KK, Naveed IA, Kamal F, Chughtai AS. Profile of malignant skin tumors over a period of five years at the department of pathology King Edward Medical College, Lahore. *Biomedica* 1999; **15**: 5-8.
10. Shahryar AH, Chaudhry M, Sarwar G. Clinico-epidemiological analysis of skin cancers. *Ann King Edward Med Coll* 1998; **4**: 82-3
11. Fayyaz GQ, Asim M, Nagra ZM. Basal cell carcinoma; experience at the department of plastic surgery, Allied Hospital, Faisalabad. *Professional Med J* 2002; **9**: 236-40.
12. Memon GA, Memon AR, Kumar M. Basal cell carcinoma in our population: A study of 21 years experience. *J Liaquat Uni Med Health Sci* 2002; **1**: 7-10.
13. Yasmeen N, Saeed S, Kanjee A, Sadiq S. A study of 75 cases of malignant skin tumors. *J Pak Assoc Dermatol* 2002; **12**: 130-4.
14. Ayesha A, Alam MB, Khan W *et al.* Frequency and characteristics of skin cancers diagnosed at Ayub Medical College Abbottabad. *J Ayub Medical Coll Abbottabad* 2007; **19**: 3-6.
15. Dilnawaz M, Dar NR, Mushtaq S. Malignant melanoma of the skin. A clinico-pathological correlation and therapeutic option. *J Pak Assoc Dermatol* 2001; **11**: 31-3.