

## Clinicopathological Evaluation of Skin Malignancies at Tertiary Care Hospital in Western Rajasthan

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### Abstract

**Background:** Worldwide BCC is the commonest cutaneous malignancy, but in India, SCC is reported to be the most prevalent skin cancer. In the present study, we performed a prospective study on cancer of skin at the Department of General Surgery Sardar Patel Medical College, Bikaner, Rajasthan.

**Methods:** Hospital based prospective study conducted at patients of skin cancer attending to Department of General Surgery, Oncosurgery, Radiotherapy, Skin & V.Dsardar patelMedical College and P.B.M Hospital, Bikaner

**Results:** Out of 100 patients, SCC was diagnosed in 61 patients, BCC was in 36 patients and malignant melanoma was diagnosed in 3 patients.

**Conclusion:** Skin cancers are quite common and their incidence has increased in last few decades, in this study we found that skin cancer were more common in males of lower socioeconomic status, probable cause was increased sun exposure and chemical exposure, in respect to females.

**Keywords:** Skin cancers, BCC, SCC. Malignant Melanoma.

### Introduction

There has been an increasing concern in print and electronic media regarding increased incidence of cancer in the Rajasthan. Various authors have attempted to scientifically correlate the available data with environmental factors. Although skin cancer is a less common malignancy, its incidence is noted to be progressively increasing over last few decades<sup>1-2</sup>. Basal cell carcinoma (BCC), squamous cell carcinoma (SCC) and malignant melanoma are the most frequent primary skin cancers. BCC and SCC are together known as Non-Melanomatous Skin Cancers (NMSC). Skin cancers are relatively uncommon malignancies worldwide not ranking among the first ten common cancers, although there has been progressive increase in the skin cancers over last few decades.

Worldwide BCC is the commonest cutaneous malignancy, but in India, SCC is reported to be the most prevalent skin cancer. Skin cancer incidence in India is relatively lower in comparison to the western world<sup>3-4</sup>, but absolute number of cases is estimated to be significant due to larger population base. In India, skin cancer constitutes less than 1% of all diagnosed cancers. BCC is the commonest skin cancer worldwide, but various studies from India have

consistently reported SCC as the most prevalent skin malignancies. Although, the incidence of skin cancers in India is lower as compared to the western world.

The Western and Asian data have considerable variations in case distribution and presentation. In the present study, we performed a prospective study on cancer of skin at the Department of general surgery sardar patel medical college, Bikaner, Rajasthan.

**Materials And Method**

**Study design:** Hospital based prospective study.

**Study duration:** 12 months

**Study place:** Department of General Surgery, S.P.Medical College and P.B.M Hospital, Bikaner

**Study population:** All patients of skin cancer attending to Department of General Surgery, Oncosurgery, Radiotherapy, Skin & V.D. S.P.Medical College and P.B.M Hospital, Bikaner

**Sample size:** All patients reporting to the Department of General Surgery, Oncosurgery, Radiotherapy, Skin & V.D.. within study duration and eligible as per inclusion criteria will be included in the study.

**Inclusion Criteria:** All patients of skin cancer attending to Department of General Surgery, Oncosurgery, Radiotherapy, Skin & V.D. S.P.Medical College and P.B.M Hospital, Bikaner

**Exclusion Criteria:** Patients who are not willing to participate in this study

**Study Methodology:** Patients who satisfy the inclusion criteria after taking the valid informed consent are taken in to the study.

**Assesement Tool:** Clinical History, Demographic data.

**Data Analysis :** Data will be recorded on a Performa. The data analysis will be computer based; SPSS-22 will be used for analysis. For categoric variables chi-square test will be used. For continuous variables independent

samples's *t*-test will be used. *p*-value <0.05 will be considered as significant.

**Observations**

Hospital based prospective study conducted at 100 patients of skin cancer attending to Department of General Surgery, Oncosurgery, Radiotherapy, Skin & V.D. S.P.Medical College and P.B.M Hospital, Bikaner.

Table no.1. Age wise distribution

<b>Mean age (yrs)</b>	64.16
<b>SD</b>	13.80
<b>Range</b>	24-76

Mean age of patients 64.16 ±13.80Yrs. Minimum age of patients was 24 Yrs and maximum age of patients 76 Yrs.

Table no. 2. Sex wise distribution

<b>Sex</b>	<b>No. of patients</b>	<b>Percentage</b>
<b>Male</b>	59	59.00
<b>Female</b>	41	41.00
<b>Total</b>	<b>100</b>	<b>100.00</b>

Out of 100 patients 59.00% patients were male and 41.00% patients were female.

Table no. 3. Occupation wise distribution

<b>Occupation</b>	<b>No. of patients</b>	<b>Percentage</b>
<b>Agriculture</b>	41	41.00
<b>Driver</b>	10	10.00
<b>Labourer</b>	38	38.00
<b>House wife</b>	7	7.00
<b>Student</b>	4	4.00
<b>Total</b>	<b>100</b>	<b>100.00</b>

Out of the total 100 patients, 41were Farmers, 38 were labourers and 10were drivers.

Table no. 4. Clinical profile wise distribution

Clinical profile	No. of patients	Percentage
Swelling	4	4.00
Ulcer	57	57.00
Ulceroproliferative growth	34	34.00
Navei	3	3.00
Skin induration	22	22.00
Erythema	14	14.00
Plaque	6	6.00
Papule	8	8.00

Out of 100 patients, ulcers were present in 57 patients, ulceroproliferative growth was present in 34 patients, skin induration was present in 22, erythema was present in 14, plaque was present in 6 and papule were present in 8 patients.

Table no. 5: Other clinical presentations associated with Ulcer / swelling / growth

Clinical presentation	No. of patients	Percentage
Discharge	55	55.00
Paraesthesia	12	12.00
Disfigurement	76	76.00
Loss of function	31	31.00
Pain	16	16.00

Out of 100 patients of skin cancer, 55 had discharge from pathological site, 12 had paraesthesia, 76 had disfigurement, 31 had loss of function and 16 had pain.

Table no. 6. Risk factor wise distribution

Risk factor	No. of patients	Percentage
Exposure to sunlight	60	60.00
Sexual	2	2.00

exposure		
Chemical exposure	10	10.00
Fairy skin	24	24.00
History of naevi	4	4.00
<b>Total</b>	<b>100</b>	<b>100.00</b>

Out of 100 patients of skin cancer, 60 had history of exposure to sunlight, 2 had H/O sexual exposure, 4 had congenital Naevi, 10 had exposure to chemicals in factory like arsenic and 24 were fair skinned individuals.

Table no. 7. Type of skin cancer wise distribution

Skin cancer	No. of patients	Percentage
BCC	36	36
SCC	61	61
MM	3	3
<b>Total</b>	<b>100</b>	<b>100.00</b>

Out of 100 patients, SCC was diagnosed in 61 patients, BCC was in 36 patients and malignant melanoma was diagnosed in 3 patients.

### Discussion

Hospital based prospective study conducted at 100 patients of skin cancer attending to Department of General Surgery, Oncosurgery, Radiotherapy, Skin & V.D. S.P.Medical College and P.B.M Hospital, Bikaner.

Skin cancer is one of the oldest cancers known to man. The earliest accredited report of skin cancer is found in the 5th Century BC in the writings of Hippocrates. The earliest incidence of skin cancer was discovered by pathologists in the skin of Peruvian mummies in 4th Century BC.

In our study Mean age of patients 64.16 ±13.80Yrs. Minimum age of patients was 24 Yrs and maximum age of patients 76 Yrs.

According to a study conducted by Jina A et al<sup>5</sup> the highest incidence of skin cancer was in the 5th to 7th decade of life followed by the 4th decade. The least incidence of skin cancer was 2nd decade and below. In this study 53.4% of cases were between 50-70 years old followed by 10% in between the age group of 30-40 years. Only 2% (2 cases) were 20 years or less. Highest age of patient was 95 years and lowest age was 15 years in this study.

According to a study by Berwick M and Weinstock MA, cutaneous melanoma skin cancer incidence varies dramatically, ranging for as low as 0.2/100000 for females in India to 42/100000 among females in N. Queensland, Australia<sup>6</sup>.

In our study out of 100 patients 59.00% patients were male and 41.00% patients were female.

According to a study conducted by Jina A et al<sup>5</sup> was observed that out of 101 patients, 66 were male and 35 were female. Thus, the male to female ratio was 1.9:1 for all types of skin cancers.

Berwick MW et al<sup>6</sup> was observed the incidence of MM in US and Australia is 1:1 for male to female.

Out of the total 100 patients, 41 were Farmers, 38 were Labourer, 10 were Drivers, 7 Housewife, 4 were students. Out of 100 patients of skin cancer, 60 had history of exposure to sunlight, 2 had H/O sexual exposure, 4 had congenital Naevi, 10 had exposure to chemicals in factory like arsenic and 24 were fair skinned individuals.

Jina A et al<sup>5</sup> was indicated that 60 (59%) patients were farmers and daily labourers with history of increased exposure to sunlight. The next highest incidence of skin cancer was found in factory workers which formed 14 (13.86) of the total number of cases. This study pointed out a relation between occupation and skin cancer. This was confirmed by a HELIOS-1 multicentre case control study done by Berta Suarez, Gonzalo Lopez and Carmen

Martinez, which analysed 1585 cases and found increased incidence of skin cancer in farmers, daily labourers and factory workers.<sup>7-9</sup>

Armstrong and Kricker have estimated that approximately two-thirds of the world's cases of melanoma may be related to sun exposure. Increased exposure to sunlight is one of most important risk factors for development of skin cancer. The risk of developing MM after exposure to sunlight is increased and was accessed in a study by Osterlind A et al in a Danish case control study. Similar finding was confirmed in a study by Elwood JM et al.<sup>10-12</sup> Similarly, the pathogenesis of BCC most commonly involves exposure to ultraviolet light (UVL), particularly rays in the UVB spectrum (290 to 320 nm), as confirmed in a study by Leffell DJ.<sup>13</sup>

In our study out of 100 patients, ulcers were present in 57 patients, ulceroproliferative growth was present in 34 patients, skin induration was present in 22, erythema was present in 14, plaque was present in 6 and papule were present in 8 patients. Out of 100 patients of skin cancer, 55 had discharge from pathological site, 12 had parasthesia, 76 had disfigurement, 31 had loss of function and 16 had pain.

Jina A et al<sup>5</sup> was found that ulcer was the commonest mode of presentation and was found in 54 (53.47%) cases. This was followed by UPF growth in 35 (34.65%) cases. Skin induration was present in 20 (19.80%) followed by erythema in 12 (11.88%) and papule in 5 (4.95%) cases. Other clinical presentations associated with ulcer / swelling / UPF growth were discharge in 56 (55.45%) followed by loss of function in 40 (39.60%) and pain in 31 (30.69%) cases. All patients had or complained of disfigurement.

## Conclusions

Skin cancers are quite common and their incidence has increased in last few decades, in this study we found that skin cancer were more common in males of lower socioeconomic status, probable cause was increased sun exposure and chemical exposure, in respect to females.

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