



## Study of Skin Cancer at Outdoor Patient Department of Tertiary Care Center

## KEYWORDS

Basal cell carcinoma, squamous cell carcinoma, Malignant melanoma

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**ABSTRACT** Title: Study of skin cancer at outdoor patient department of tertiary care center

**Introduction:** Skin cancer is the most common malignancy in the white population worldwide. The two most common variants are basal cell carcinoma (BCC) and squamous cell carcinoma (SCC), the third most frequent skin cancer type, malignant melanoma (MM). Early detection of skin cancers could be very beneficial to decrease their morbidity or mortality. **Design:** A retrospective study was undertaken to determine the incidence of skin cancer during the period of January 2009 to December 2013 at the Dermatology OPD of tertiary care hospital. Data regarding the patients in which skin malignancy was suspected were collected from biopsy record. **Result:** These malignancies included 12 cases of basal cell carcinoma, 16 cases of squamous cell carcinoma out of which 14 patients were having oral SCC and 1 case of malignant melanoma. **Conclusion:** Incidence of skin cancer is low in Indian population. There is an increase number of patients with oral cavity SCC because of tobacco chewing. Early detection of skin cancer can improve prognosis.

### Introduction

Skin cancer is the most common malignancy in the white population worldwide. The two most common variants are basal cell carcinoma (BCC) and squamous cell carcinoma (SCC); regardless of their low mortality rates, these tumors can provoke severe consequence as a result of their treatment. The third most frequent skin cancer type, malignant melanoma (MM), has a more destructive behavior and accordingly a poor prognosis; malignant melanoma accounts for approximately 75% of all deaths from skin cancer<sup>[1,2]</sup>

Basal cell carcinoma is generally a disorder of white individual in whom there is lifetime risk of 28%-33% developing this malignancy.<sup>3</sup> The male to female ratio is approximately 3:2. It typically occurs in areas of chronic sun exposure.

SCC is the second most common form frequently arising on the sun exposed skin of middle aged & elderly individual. The estimated lifetime risk of developing SCC is 7% -11%.<sup>4</sup> It is twice as common in men as in women.

SCC may develop de novo in the absence of a premalignant lesion on both sun exposed and covered sites. It can also develop from premalignant lesion such as actinic keratosis, tar keratosis etc.

In India, there are limited studies about prevalence and incidence of skin cancers.

### Material & Methods

A retrospective study was undertaken to determine the incidence of skin cancer over the period of five years from January 2009 to December 2013 at the Dermatology OPD of tertiary care hospital. Data regarding the patients in which skin malignancy was suspected were collected from biopsy record.

The skin examination was done by visual inspection and use of hand lens in the setting of proper lighting. The alarming signs including bizarre or asymmetric shape, un-

even color, increasing size, resistant ulcers or erosions were considered for decision to perform skin biopsy. Final diagnosis was made on the basis of histopathological examination.

### Result

**Table 1: Clinical diagnosis of suspected lesions by dermatologist**

Type of lesion	Male	Female	Total
Basal cell carcinoma	30	34	64
Squamous cell carcinoma	22	10	32
Malignant melanoma	14	10	24
Total	66	54	120

According to table 1 skin cancer was suspected in Total 120 patients, 52 males and 68 females, with mean age of  $52.80 \pm 10.24$  years.

**Table 2: Final diagnosis of the suspected lesions**

Type of lesion	Male	Female	Total
BCC	8	4	12
SCC	12	4	16
Malignant Melanoma	1	0	1
Actinic keratosis	3	1	4
Keratoacanthoma	1	0	1
Dysplastic nevus	14	6	20
Compound nevus	5	14	19
Seborrheic keratosis	4	10	14
Lentigo	2	4	6
Dermatofibroma	3	1	4
Junctional nevus	0	3	3
Sebaceous nevus	1	1	2
Other	12	6	18
Total	66	54	120

Dermatologist found suspected lesions in 120 of patients with possible diagnosis of BCC, SCC or malignant melanoma which were located mostly on the head, neck. All these patients underwent the wholebody skin examination by a dermatologist and skin biopsy performed in patients for the histopathological examination. Table 2 shows the final diagnosis of suspected malignant skin lesions.

The diagnosis of skin cancer was finally confirmed by histopathology evaluation in 29 patients. Out of which there were 12 patients of BCC, 16 patients of SCC out of which 14 patient were having oral SCC and 1 patient of malignant melanoma. One patients with BCC had positive personal history of breast cancers but no family history of skin cancer.

There were 4 patients of actinic keratosis and 1 patient of keratoacanthoma. There were twenty patient of dysplastic nevus diagnosed. Outdoor occupations was significantly higher in skin cancer diagnosed patients ( $P < 0.05$ , Chi-square test).

Out of 14 patients with oral SCC 5 patients were having enlarged submandibular and submental lymphnode. FNAC of enlarged lymphnode was done. 3 out of 5 patients were showing malignant changes in enlarged lymphnode.

#### Discussion

Early diagnosis of skin cancer is very crucial to improve the prognosis, for best treatment results, and increase the quality of life of the patient. In this regard, there are many studies upon skin cancer screening with valuable results upon the importance of early detection of skin malignancies.<sup>[5,6]</sup>

In this study over a period of 5 year we found 29 patients with skin cancer. Out of which there were 21 male and 8 female. Outdoor occupations was significantly higher in skin cancer diagnosed patients. There were 12 patients of BCC. (8 male and 4 female) out of 12 patient 9 patients were having noduloulcerative type of BCC which is the commonest morphological type. Most common site of BCC was face. 3 patients were having superficial BCC.

Exposure to ultraviolet radiation is the main causative factor in the pathogenesis of basal cell carcinoma. However, the precise relation between risk of basal cell carcinoma and the amount, timing, and pattern of exposure to ultraviolet radiation remains unclear. Studies are hampered by difficulties in reliably assessing ultraviolet exposure in an often elderly study population. However, given these concerns, many population based studies have used validated questionnaires to assess exposure. Several studies have shown an association between cumulative ultraviolet exposure and risk of basal cell carcinoma, although the magnitude of risk conferred has been small.<sup>[7,8]</sup> Other studies have failed to find a significant association between estimated cumulative sun exposure in adulthood and the presence of basal cell carcinoma.<sup>9</sup>

Recreational sun exposure in childhood seems to be an important risk factor; an Italian study calculated an almost fivefold increase in risk for an average summer holiday exposure of more than eight weeks throughout childhood (before the age of 20 years).<sup>8</sup> Outdoor occupation after the age of 20 years was not associated with an increased risk of basal cell carcinoma.<sup>10</sup> This suggests that childhood and adolescence may be critical periods for establishing adult risk for basal cell carcinoma and may explain why studies

have failed to find a large impact of increased cumulative sun exposure in adulthood on the risk of basal cell carcinoma.<sup>11</sup>

Out of total 29 patient 1 patient with BCC was having history of breast cancer. The association of basal cell carcinoma with other malignancies remains unclear, with some studies showing no association and others suggesting a small increase in risk of cancer of the lung, thyroid, mouth, breast, and cervix and non-Hodgkin's lymphoma.<sup>[12,13]</sup> The explanation for these observations is unclear, but exposure to carcinogens such as ultraviolet radiation, cigarette smoke, and arsenic may be relevant.

There were 16 patients with SCC. Out of which 12 patients were male. Most common sites for SCC in our study was floor of the mouth followed by lateral aspect of tongue. Out of 12 patients 7 patients were having habit of tobacco chewing and bidi smoking. Subapriya et al also found that tobacco chewing, Bidi smoking and alcohol drinking emerged as significant risk factors for oral cancer.<sup>14</sup>

Oral scc develop on the background of leukoplakia or erythroplasia. Oral leukoplakia more commonly occurs in those who smoke. The chance of transformation of leukoplakia into oral squamous cell carcinoma varies from almost 0% to about 20%, and this may occur over 1 – 30 years.<sup>[15]</sup> Oral squamous cell carcinoma, the fifth most common cancer worldwide, is a major cause of morbidity and mortality in India. There was 1 patient of malignant melanoma in five year. Malignant melanoma is an uncommon disease in India carrying a lot of morbidity due to late presentation.

There were 4 patient if actinic keratosis. Out of 4 patients 3 patients were involved in outdoor occupation. The main risk factor for actinic keratosis is increased sun exposure. They are considered as potentially pre-cancerous, since some of them progress to squamous cell carcinoma,<sup>[16]</sup> so treatment is recommended. Untreated lesions have up to 20% risk of progression to squamous cell carcinoma.<sup>[17]</sup>

There were 20 patients with dysplastic naevus. Most common sites in men was trunk and in female was calves. Dysplastic nevi often grow to larger than ordinary moles, and may have irregular and indistinct borders. Self examination is frequently recommended for preventing melanoma or for early detection of existing tumors. Individual with either histologic diagnosis of dysplastic nevus, or clinically apparent atypical moles should be examined by an experienced dermatologist with dermatoscopy once a year.

#### Conclusion:

Skin cancer is not very common in dark skinned individuals. In India oral SCC is one of the common cause of increasing morbidity and mortality due to cancer. To prevent development of oral SCC increasing awareness among people about avoidance of tobacco will be helpful.

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