

## Original Research Article

# The study of cutaneous malignancies at a tertiary care hospital in central india

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### ABSTRACT

**Background:** There has been an alarming rise in the incidence of various diseases including that of cancer in the world with increase in the incidence of cutaneous malignancies owing to various changes that have taken place in the society over the past few years with respect to the culture, the lifestyle and also a contributory role has been played by the changes in the atmosphere as a result of increase in the air pollutants in the environment. Based on the scenario, we decided to conduct a study to evaluate the presentation and the management cutaneous malignancies in a teaching hospital set up in central india.

**Methods:** A retrospective study was conducted between the time period of 1 year on the records of patients who were diagnosed with cutaneous and related malignancies who were treated at our Institute on a predesigned semi structured performa. SPSS version 23.0 was used for the analysis of the data collected.

**Results:** We evaluated a total of 29 cases, Squamous cell carcinoma (SCC) was the most common histological type (51.72%) followed by melanoma (27.59%) and basal cell carcinoma (BCC, 20.69%). 75.86% of patients with cutaneous malignancies were males and 24.14% were females. Mortality rate observed was 13.7%.

**Conclusions:** The most common cutaneous malignancy seen in this study was squamous cell carcinoma having increased propensity towards males than females. Rate of loco-regional disease and median disease-free survival is directly dependent on the adequacy of disease-free surgical margin and to the limited extent on the adjuvant therapy.

**Keywords:** Basal cell carcinoma, Central India, Malignant Melanoma, Squamous cell carcinoma

### INTRODUCTION

The world has seen an alarming rise in the incidence of various diseases including that of cancer. There has been an extensive increase in the incidence of cutaneous malignancies.<sup>1</sup> This is thought to be a contribution from the various changes that have taken place in the society over the past few years with respect to the culture, the lifestyle and also a contributory role has been played by the changes in the atmosphere as a result of increase in the air pollutants in the environment.<sup>2</sup> In comparison to the western data the literature that is available in the

context of cutaneous malignancies literature states that, the incidence of cutaneous malignancies in India ranges between 1 to 2 percent.<sup>1,3,4</sup>

Though in terms of percentage this figure may be small but as India is one of the most populous nations in the world the overall numbers when added is a lot. Though cutaneous malignancies are on the body's surface their detection can often be delayed more so in India where superstitious beliefs are still prevalent, and most diseases are thought to be caused by wrath. Having stated the above another interesting fact is that from India there are

very few studies that have evaluated the management and prognosis of cutaneous malignancies. In view of this we decided to conduct a study to evaluate the presentation and the management cutaneous malignancies in a teaching hospital set up in Central India.

**METHODS**

The retrospective study was conducted between the time period, August 2018 to July 2019. As it was a retrospective study the sample included all the records of patients who were diagnosed with cutaneous and related malignancies who were treated at our Institute with details on epidemiologic, treatment, post-op course, complications, morbidity and mortality. Those case records that did not have adequate data, or those who did not take treatment form this institute were excluded. The study was initiated after a clearance was obtained from the institutions ethical committee. The details of the collected data were entered on a predesigned semi structured Performa. SPSS version 23.0 was used for the analysis of the data collected. The categorical variables were summarized by frequency and percentage and quantitative variables were summarized by mean and range.

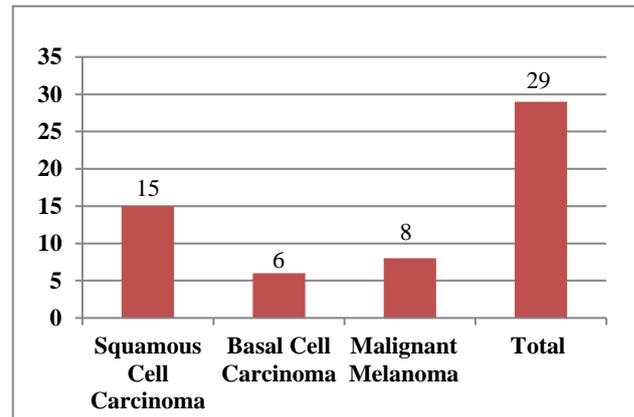
**RESULTS**

During the period of our study we had treated a total of 36 patients, cutaneous and related malignancies. 7 of

them were not treated in our hospital or lost follow up hence, they were excluded from our study, we evaluated a total of 29 cases, and our observations are as follows:

**Table 1: Distribution of the type of cancer.**

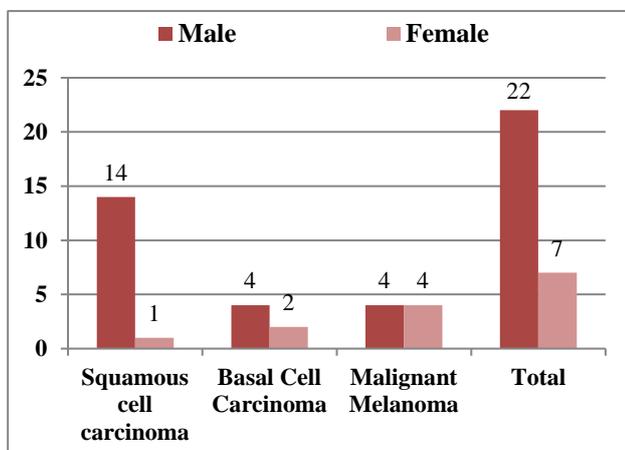
Type of cancer	Frequency	Percentage
Squamous cell carcinoma	15	51.72%
Basal cell carcinoma	6	20.69%
Malignant melanoma	8	27.59%
Total	29	100.00%



**Figure 1: Distribution of the type of cancer.**

**Table 2: Gender distribution in the study.**

Type of cancer	Male	Female	Total	Percentage
Squamous cell carcinoma	14	1	15	51.72%
Basal cell carcinoma	4	2	6	20.69%
Malignant melanoma	4	4	8	27.59%
Total	22	7	29	100.00%
Percentage	75.86%	24.14%	100.00%	3.45%



**Figure 2: Gender distribution in the study.**

We had a total of 15 cases of squamous cell carcinoma 6.67% were females and 93.54% were males (Table 1, 2). the age ranged from 34 years to 85 years with a mean of 55.2 years.7 cases presented with ulcer and the rest with swelling the foot was the most commonly involved site seen in 5 cases (17.24%) of the cases followed by axilla in 2 cases (10.34%) and lumbar in 2 cases (6.9%), neck, thigh, heel and the eye region were involved in 1 case each. When foot was involved, below knee amputation was done. In the neck, thigh and lumbar region primary closure following wide local excision was done.

In one case that involved the femur, hip disarticulation was done while the cases that involved both axilla and inguinal nodes, axillary dissection along with inguinal nodal dissection was done on the side involved. 14 of the 15 cases were Well Differentiated Squamous Cell Carcinoma (Grade

I), one case was of Moderately Differentiated Squamous Cell Carcinoma (Grade II), 12 of the 15 cases metastases to regional lymph nodes were seen. At one year follow up 12 patients are diseases free and alive. One patient with SCC of the right thigh with femur involvement, one with abdominal wall a suprapubic SCC and one with left eye SCC succumbed to the disease.

We had a total of 6 cases of Basal Cell Carcinoma 33.33 % were females and 66.66% were males (Graph 1, 2). The age ranged from 40 years to 80 years with a mean of 56.11 years. All the cases presented with ulcer and the most commonly involved site were the nose and scalp in 2 cases each (66.66 %) followed by face and axilla involved in 1 case each. In all cases following wide local excision following which was done primary closure with a local reconstruction or skin grafting was done. Histopathology revealed Basal Cell Carcinoma with free margins in all cases. At one year follow up, all patients are diseases free and alive.

We had a total of 8 cases of Malignant Melanoma equal number of males (4 cases, 50%) and females (4 cases, 50%) (Table 1, 2). The age ranged from 40 years to 79 years with a mean of 53.43 years. The most common involved site was anal canal in 4 cases (50%) followed by foot in 2 cases (25%) and vulvovaginal and eye were involved in 1 case each. In 2 cases as it was metastatic only chemotherapy was given via chemo port. Abdominal perineal resection with lymphadenectomy was done in 3 cases of anal canal melanoma, for vulvovaginal local excision with lymph node dissection of the affected inguinal region was done. Both the foot melanomas underwent wide local excision with a local reconstruction. Histopathology revealed Malignant Melanoma with metastasis to regional inguinal lymph nodes in 50%. All the patients received appropriate chemotherapy following surgical treatment. At one year follow up, 5 patients are diseases free and alive. One patient with hepatic metastases succumbed to the disease

## DISCUSSION

When we consider cutaneous malignancies; we can categorize them into two broad categories based on whether they secrete the pigment melanin.<sup>2</sup> The categories of dermatological malignancies are non-melanomatous dermatological malignancies that include basal cell carcinoma abbreviated as BCC and the squamous cell carcinoma SCC and melanomatous dermatological malignancies that include malignant melanoma. The reported incidence of skin cancers in India is less than 1% of all cancers.<sup>2</sup> In the Western countries, a vast majority of skin cancers are NMSC, mainly BCC.<sup>5</sup> Similar to various earlier studies from India, the current study also shows that the most common histologic type of skin cancers is SCC (51.72%).<sup>6</sup> The biologic behavior of skin malignancies varies widely. Basal cell carcinoma rarely metastasizes and has an excellent prognosis and survival, whereas melanoma can be one of the most lethal malignancies with a high

propensity for regional and systemic spread. Squamous cell carcinoma has 2-6% incidence of distant metastasis.<sup>5</sup> Approximately 3-10% of patients with melanoma present with metastatic disease in the absence of a clinically demonstrated primary lesion.<sup>5</sup> Likewise in our study, patients with SCC leg and arm had to undergo axillary and inguinal dissection while patients with anal canal melanoma and vulvovaginal melanoma had to undergo abdomino perineal resection and vulvovaginal excision respectively with inguinal block dissection bilaterally. The modalities of treatment are different for these three groups of cutaneous malignancies.<sup>2</sup> Even though, surgery is the mainstay of treatment for all the cutaneous malignancies, the extent of surgery, both local and regional varies. Adequate surgery is most essential management in order to prevent recurrence and to achieve long-term cure rates. The overall prognosis for those patients with recurrent lesions is drastically lesser than those for patients who present with a primary lesion. Compromise of the adequacy of surgical margin increases the odds of recurrence.<sup>7,8</sup> Excision should include skin, subcutaneous tissue up to the muscle fascia.<sup>9</sup> Various trials have addressed the issue of margin.<sup>5</sup>

The results of these studies suggest that a 1cm radial margin is adequate for primaries with thickness up to 1mm and 2cm margin is adequate for primaries up to 4mm thickness. None of these studies have shown that wider margins are necessary or related to improvement in survival. Although patients with primaries more than 4 mm thickness have a relatively high (approximately 13%) risk of local recurrence, there are few data to support the use of margins wider than 2cm.<sup>9</sup> In this study, margin of excision taken for melanoma was 2cm because in most of these patients either the thickness of tumor was unknown (if excision biopsy was done elsewhere) or thickness was more than 1mm. Keeping these principles in mind, we could achieve good local control and we had 4 patients who succumbed to disease due to distant spread as a failure to the compliance to the adjuvant therapy. Although the role of adjuvant therapy is limited in skin cancers.

Postoperative radiotherapy is indicated in patients with advanced lesions, positive margins, lymph node metastasis, intransit metastases in melanoma and for palliation.<sup>10</sup> Adjuvant chemotherapy and immunotherapy is generally used in advanced stage melanoma but results show only limited success.<sup>11</sup> In the current study, the rate of loco-regional disease relapse was nil and 1-year median disease-free survival in the study population was 100% in the cases who survived. The mortality rate observed was 13.7%.

## CONCLUSION

The most common cutaneous malignancy seen in this study was squamous cell carcinoma having increased propensity towards males than females. Rate of loco-regional disease and median disease-free survival is directly dependent on the adequacy of disease-free surgical margin and to the limited extent on the adjuvant therapy.

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