A CLINICO PATHOLOGICAL STUDY OF NON MELANOTIC SKIN CANCERS (NMSC)

INTRODUCTION:
Basal cell carcinoma (BCC) and Squamous cell carcinoma (SCC) consists of 99% of Non melanotic skin cancers (NMSC). GLOBOCON 2018 estimated the incidence and mortality rates of NMSC (excluding basal cell carcinoma). According to this about 5.8% of new cases were diagnosed with NMSC in worldwide (1). The incidence of skin cancer in India is lower compared to the western countries. Basal cell carcinoma is the most common skin malignancy accounting for 65 to 70% of all skin cancers worldwide, but several studies from India have reported SCC is the most frequent skin cancer(2). While majority of them generally considered being curable, but some NMSCs in particular, SCC is responsible for most of the deaths (3). Fears et al in 1977 first described the relationship between ultraviolet exposure and the risk of developing skin cancers (4). They suggested that melanoma was mainly caused by intermittent sun exposure, while NMSCs were related to cumulative doses of ultraviolet light (5). Additional risk factors for development of NMSC include radiation therapy, prolonged immune suppression, human immune deficiency virus (HIV), human papilloma virus (HPV), and a diagnosis of certain clinical syndromes or a genetic disorder (6-11). The purpose of this study is to analyze the clinico pathological profile of skin cancer patients presenting to tertiary care centre in Andhra Pradesh.

MATERIAL AND METHODS:
This retrospective hospital based study conducted in department of Surgical Oncology, Sri Venkateswara institute of Medical sciences, Andhra Pradesh from 2012 to 2018. Patients with biopsy proven SCC and BCC were included. Detailed history with various patient characteristics like age, gender, duration of symptoms, occupation, exposure to pesticides, treatment with psoralen UVA (PUVA) or narrow band UVB (NB-UVB), history of radiation exposure, family and personal history of cancers and history of previous treatment were recorded. Tumor details like size, number and location were collected. Blood investigations include hemogram, renal function tests, liver function tests, coagulation parameters and viral markers were done. Imaging like contrast enhanced computed tomography and magnetic resonance study were done as and when required to know the local extent and regional spread of the tumor. The lesions measuring less than 2-3cm in size except on face were treated with wide local excision. Bigger lesions and lesions from marjolin ulcer were treated with wide local excision and skin graft. The lesions amenable for the loco regional flaps were reconstructed with the same. Lesions close to the bone or joint where the bone reconstruction could not possible were subjected to the amputation. Clinically positive regional lymph nodes were addressed with lymph node dissection. Adjuvant postoperative radiotherapy was considered for locally advanced growths and regional nodal spread.

RESULTS:
A total of 70 histopathologically confirmed cases of Non melanotic skin cases were included in the analysis. Among 70 patients 27 (38.6%) patients were female and 43(61.4%) patients were male. Majority of patients were in the age group of more than 60 years. Forty two (60 %) patients had SCC; 28 (40 %) patients had BCC. Fifty seven patients were treated with wide local excision. Bigger lesions and lesions from marjolin ulcer were treated with wide local excision. Amputation was done in 13 SCC patients. Head was the most common site followed by lower limb. There was a significant association between the type of cancer and the involved site (P-value was <0.001). Head was the most common site involved in SCC and extremities were most common site affected in SCC. Regional lymph nodes were involved in 5 patients with SCC and 1 patient with BCC at initial presentation. Among 42 SCC patients, 14 (5.8%) patients had recurrence. Regional nodal and distant recurrences were noted in 12 and 2 patients respectively. Two SCC patients with distant metastasis received palliative chemotherapy with taxane and platinum compounds.

Conclusion: NMSCs are more prevalent in sixth and later decades. Major contributory risk factor includes intermittent rather than constant UV exposure. Head and neck is the most common site of involvement. Surgical resection remains the most common treatment method for NMSCs.

ABSTRACT
NMSC, basal cell carcinoma, squamous cell carcinoma, UVA

KEYWORDS
Basal cell carcinoma, Squamous cell carcinoma, UVA
DISCUSSION:
Non-melanoma skin cancers (NMSC) are the most common cancers worldwide. The incidence of skin cancer in India is reported as less than 1% of all the cancers (12). SCC is more common than BCC in dark skinned individuals. Various studies from India reported SCC is the most prevalent skin malignancy (13-16). In our study we also found SCC is the most common skin cancer. The median age at presentation in our study in BCC was 60 (Range 37-90) whereas it was 51 years in SCC (Range 17-78), which is similar to the study done in Manipur India (17). Skin malignancies tend to occur mainly in the sixth, seventh and later decades (18, 19). Majority of our patients are similarly presented in sixth and later decades.

Immunocompromised patients like HIV positive patients or organ transplant recipients have an increased risk of NMSC when compared to general population. Patients with HIV have a nearly 3-fold increased risk of developing primary NMSC as compared to the general population and a 44% increased risk of subsequent NMSC (20). In our study one patient was sero positive for HIV infection.

Skin cancers occur mainly in the sun exposed regions and in the face and neck areas of the body (17, 21). Our study also shows that 51.4% of the all reported skin cancers were found in the head and neck region. When the data was analyzed based on the type of skin cancers, BCC was most common in head region whereas SCC was more common in extremities. This finding is contrary to the reported studies (15, 16, 17, 18).

Though SCCs can arise in normal skin, they often develop from precancerous lesions like actinic keratoses and Bowen’s disease and have also been found to occur in burn scars. Burn scar carcinoma accounts for 2% of SCC (22). In the present study 6 patients developed SCC from burn scar.

Fine needle aspiration or biopsy is reasonable, when palpable regional lymph nodes are present or abnormal lymph nodes are identified on imaging studies (23). In the case of positive results, excision of primary tumor and proper nodal dissection followed by chemo radiation therapy is a standard of care. In the present study regional lymph nodes were involved in 5 patients with SCC and 1 patient with BCC at initial presentation, only 2 patients had positive results after biopsy and underwent regional lymph node dissection and received adjuvant radiation therapy.

Systemic chemotherapy has an important role in the management of advanced NMSC. Platinum based compounds such as cisplatin are the most commonly used chemotherapeutic agents for NMSC. Other chemotherapy drugs including cyclophosphamide, bleomycin, doxorubicin, methotrexate, and 5-FU, may also be used (24). In our study 2 patients with metastatic SCC received palliative treatment with doxorubicin, methotrexate, and 5-FU, may also be used (24). In our study one patient was sero positive for HIV infection.

In conclusion, NMSCs are more prevalent in sixth and later decades. Major contributory risk factor includes intermittent rather than constant UV exposure. Head and neck is the most common site of involvement. Surgical resection remains the most common treatment method for NMSCs. Since early detection and treatment of lesions are crucial to decrease functional and cosmetic morbidity and costs. RT is reserved for local lesions if the patient is not a surgical candidate or in metastatic disease. Systemic chemotherapy has an important role in the management of advanced NMSC.

REFERENCES: