Cutaneous Malignancies Presenting as Superficial Ulcers

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Abstract: Epidermal skin cancers are the most common cancers in humans. Epidermal skin cancers present a unique opportunity for effective intervention with both early detection and primary prevention. They are amenable to clinical diagnosis by simple visual inspection and to pathologic diagnosis by minimally invasive biopsy. Our objective is to show that the cutaneous malignancies are common in our environment and frequently present as superficial ulcer. This is a 4-year retrospective histopathological analysis of cutaneous malignancies diagnosed between January 2006 and December 2009 in the Department of Pathology, Federal Medical Centre, Keffi, Nasarawa State. The specimens were fixed in 10% buffered formalin, processed in paraffin wax and stained with haematoxylin and eosin. The slides were studied and the lesions were characterized by two consultant pathologists who were blinded and they agreed on the diagnosis. Twenty-one cases were reviewed in this analysis. The age range was between 20-79 years old with the mean age of 59.5 years old. The male to female ratio was 1.1:1. The peak age of distribution was in the fourth decade. In this review, the most common malignancy was squamous cell carcinoma; followed by malignant melanoma and basal cell carcinoma. The lower extremity was the commonest site with 11 (52.2%) cases; this was followed by the head and neck region with 7 (33.1%) cases, while one (4.7%) case with each presented in the anterior chest wall, elbow and at an unspecified site. Cutaneous malignancies are common in our environment; and the early sign is that of chronic non-healing ulcer. So there is need for high index of suspicion on the part of the Clinicians and Pathologists. Early identification of high-risk lesions can allow for more rapid therapeutic intervention, reducing the likelihood of metastasis and death.

Key words: Cutaneous malignancies, superficial ulcers, squamous carcinoma, malignant melanoma.

1. Introduction

Malignant skin tumours are among the most common form of cancer [1, 2]. Skin cancers are the most frequently diagnosed cancer in the United States; of these, approximately 80% are BCC (basal cell carcinoma) and 20% are SCC (squamous cell carcinoma), the second most common skin cancer [2]. The incidence of skin cancer among the darker pigmented peoples of other regions of the world is much lower.

In Africa, several studies reveal the preponderance of SCC [3-5]. Among Africans, there are significant differences in the pattern of skin cancer. In Tanzania, Kaposi sarcoma is the second most common

dermatological malignancy, whereas melanoma is the second most common in Northern Nigeria [4, 5]. Plantar melanomas are relatively common in sub-Saharan Africa but much less common among Africans-Americans [6, 7].

The associated risk factors in cutaneous cancers include exposure to UV (ultraviolet) radiation, immune suppression, use of tobacco or alcohol, age, familial or genetic predisposition, nutritional status, chronic irritation, ulceration and exposure to industrial products, heavy metals, viruses or ionizing radiation [2, 8].

2. Materials and Methods

Patients with confirmed histopathological diagnosis of cutaneous malignancies from the histopathology laboratory of the Department of Pathology, Federal Medical Centre, Keffi, Nasarawa State, between

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January 2006 and December 2009 were studied. All relevant slides stained with H&E (haematoxylin and eosin) were retrieved and reviewed by two pathologists blinded, and they were in agreement with the diagnosis.

Special stains such as Masson Fontana for melanin and reticulin stain for collagen were used when necessary in further characterization of the tumours. Clinical data on age, sex, and anatomic sites were obtained from the accompanying request cards.

The tumours were classified according to the World Health Organization classification of skin tumours [9].

2.1 Results

Twenty-one cases of histologically confirmed cutaneous malignancies were reviewed in this analysis. The age range was between 20-79 years old with the mean age of 59.5 years old. There were 11 males and 10 females constituting a ratio of 1.1:1. The peak age distribution was in the fourth decade.

3. Discussion

Cutaneous malignancies accounted for 0.8% of malignancies seen in our department during this period of study. This is low compared to similar reviews done in Kano (12.7%) [10], Zaria (10.8%) [11] and Jos (6.8%) [12] in Nigeria. Even with the differing figures from these Nigerian studies, the relative frequency of skin cancer is much lower than in White populations where skin cancer accounts for over 80% of all malignancies especially among those living in sunny tropical/subtropical climates [2, 3].

Squamous cell carcinoma is the commonest cutaneous malignancy in this review (Table 1). This is similar to reports from Zaria [11], Jos [12], Kano [10], and Uganda [13], but differs from Calabar [14] and Zimbabwe [15] who reported Kaposi sarcoma was their commonest cutaneous malignancy. The most prevalent site is the lower limb (Table 2), and this finding is similar to reports from Nigeria [10-14] and Tanzania [4].

While sun exposure is the major aetiological factor in Whites, chronic ulcers and inflammation appear to be leading risk factor in Blacks. In numerous reports from Nigeria and other parts of Africa document, SCC was secondary to chronic ulcers as the commonest cutaneous malignancy [3, 4].

The second most common cutaneous malignancy in this study is malignant melanoma, and it accounts for 30% of the cancers seen, though this is similar to findings from Zaria (14.1%) [11], Kano (34%) [10] and Jos (24%) [12], they had a larger number of patients in their series as compared to our study.

All the cases of malignant melanoma presented late in the lower extremities were all Clark's level III and IV. It is noteworthy that although melanomas comprise a relatively large fraction of malignant cutaneous tumours in blacks, they are in fact 10-20 times more common among the fair skinned Caucasians [2, 6, 7]. This plantar predilection of Negroid melanomas has prompted speculation of trauma as an aetiological factor [7, 16], whereas among Whites UV radiation appears again to be the major culprit as the sun exposed parts of the body. Head, trunk and legs are the favoured sites [1, 2, 6, 7]. Plantar melanomas are less common in black Americans than in black Africans, presumably because the latter that have lower standard of living are less likely to wear protective footwear [6, 7].

Table 1 Distribution of cutaneous malignancies.

Malignancy	Frequency (%)
Squamous cell carcinoma	65
Malignant melanoma	30
Basal cell carcinoma	5
Total	100

Table 2 Site of distribution.

Site	Frequency (%)
Lower limb	52.3
Head/neck	33.3
Anterior chest wall	4.8
Elbow	4.8
Unspecified	4.8
Total	100

A significant number of our patients were presented

with cutaneous malignancies in the head and neck regions, differing from the review from Calabar [16], where most of their patients were presented with lesion in the lower extremities. However, it is similar to studies from Zaria [11] and Kano [10] that recorded significant cancers in these regions.

Two cases (5%) of basal cell carcinoma were found in this study. Literature search on the reviews of cutaneous malignancies revealed that basal cell carcinoma is uncommon in Africans because of the protective skin pigmentation from UV radiation [8-14]. Our findings are comparable to reports from other parts of Nigeria [8-14]. However, up to 22% has been reported by Adeyi and Banjo [17] from Lagos. Although the incidence of basal cell carcinoma is increasing worldwide, but due to its low metastatic potential and slow growth it is usually underreported [18, 19].

In conclusion, this study has shown that squamous cell carcinoma and malignant melanoma are the commonest cutaneous malignancies as in other studies done in Nigeria and other parts of Africa. Prompt and adequate treatment of chronic leg ulcers should help to reduce the burden of these cancers.

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