Original Research Article

PATTERN OF SKIN TUMOURS SEEN IN RIVERS STATE UNIVERSITY TEACHING HOSPITAL (RSUTH), PORTHARCOURT NIGERIA: A 12 YEAR RETROSPECTIVE REVIEW

ABSTRACT

•Background: Cancers are known to be on the increase inNigeria. This has been attributed to the rise in oil exploration in the nation. The Niger Delta region faces a lot of oil spillage andis highly vulnerable to the effectsof this spillage which includes health disorders like cancers.

•Objective: To document the incidence of skin tumoursover a 12-year period in the Dermatology Out-patient clinicof the Rivers State University TeachingHospital, Port-Harcourt, Nigeria.

•Materials and Methods : The data was taken from new patient registers in the dermatology out-patient clinic and analysed.

•Results: Skin Tumoursconsists of5.3% of all dermatological diagnoses withinthe period. The M: F ratio was 1:1. Benign tumours made up 81.4% of casesand pre-malignant tumours 0.98% The commonest benign tumour iskeloids (28.9%) . Malignant skin cancers constituted17.6% of the cases with Kaposi sarcoma (9.8%), metastatic skin cancer (2.9%) and squamous cell carcinoma (2%) being the commonest skin cancers. The young adult age group (20-44) constituted majority (65.7%) of those affected with skin tumours.

•Conclusion: There is arelative low prevalence of skin tumours among patients attending the skin clinic inRSUTH(5.3%).The Commonest benign tumor is Keloids while the commonest malignant tumour is Kaposi sarcoma.

•Key words: Benign, Cancer, Skin, Tumour, RSUTH

BACKGROUND

Skin tumorsare abnormal growths on the skin that arecaused by various factors such as geneticmutations , viruses, UV radiation, viral infections etc.

Skin tumourscan be classified as benign,premalignant and malignant •Benign skin tumors can further be classifiedinto the following:

Epidermaltumors-Seborrheic keratosis, Epidermal nevus, Epidermoid cyst, Viral warts
Dermaltumors-Dermatofibroma, Lipoma, Dermatofibrolipoma,
Viraltumours-Molluscum contagiosum,
Vasculartumors-Haemangioma,, Glomus tumour, Pyogenic granuloma

Hairfollicletumors-Trichoepithelioma, Trichofolliculoma
Sweatglandtumors-Syringoma, Hidroacanthoma
Connectivetissuetumours-Fibroma, Fibrolipoma
Neuraltumours-Neurofibroma, Schwannoma
Pre-malignantskintumours- Actinic keratosis, Keratoacanthoma, Bowen's disease
Malignantskintumours- Squamous cell carcinoma, Basal cell carcinoma, Kaposi sarcoma, Rhabdomyosarcoma, melanoma etc.

Symptoms of skin tumours may include obvious growth, change in skin color or texture, bleeding, itching or pain. Tumours, especially the malignant types, have been on the increase in Nigeria. This has been attributed to the increasing prevalence of HIV in the country (1,2). Albinism is another major risk factor(3,4). Other possiblerisk factors include UV radiation, weakened immune systemfrom various causes, family history, exposure to chemicals, etc.
This increasehas also been attributed to the rise in oilexploration in the nation. The Niger Delta region faces a lot of oil spillage and is highly vulnerable to the effectsof this spillage which includes health disorders like cancers (5,6).

OBJECTIVES

The main objective of this study is to document the incidence and types of skin tumours (including skin cancers) overa 12 year period in the Dermatology Out-patient clinic of The Rivers State University Teaching Hospital, PortHarcourt, Nigeria.

SKIN TUMOURS IN RSUTH PORTHARCOURT

METHODOLOGY

This12 year retrospective study was performed in the Dermatology out-patient clinic(DOPC) ofRivers StateUniversity Teaching Hospital, Port-Harcourt, Nigeria.

Medical records of patients with various types of skin tumours that attended the clinic between January 2012 and December 2023.

were retrieved and relevant clinicopathologic data were collatedand analysed.

RESULTS

A total of 1,931 patients attended the clinic during the period studied. There was a steady increase in the number of patients seenover the years.Out of this number, 102(5.3%)presented with variousskin tumours. There was an equal number of males and females with skin tumours 51 (M:F = 1:1). See Table 1. Below:

Table1:Thesexdistributionandincidenceofskintumoursoverthe12yearperiod

Year	Male	Female	Total(with tumor	TotalnumberofpatientsseeninDOPC	Incidence
2012	3	3	6	85	0.071
2013	2	0	2	90	0.040
2014	1	0	1	90	0.020
2015	2	3	5	65	0.077
2016	3	2	5	123	0.041
2017	2	1	3	153	0.019
2018	1	0	1	156	0.006
2019	1	0	1	157	0.006
2020	2	8	10	148	0.067
2021	8	13	21	239	0.088
2022	5	8	13	300	0.043
2023	20	13	34	325	0.102

Total	51	51	102	1931		0.053

The age range of the patient with skin tumours isbetween11 and 88 years.Majority of the patients(65.7%) fall into the20 – 44 years age group.The mean age of the patients is 35.2 ± 16.6 years: See Table 2 below.

The various occupations of the subject are shownin Table 3. Mostof them were students (34.3%)

Total number of patients with skin tumourswere 102, out of which 83 (81.4%)were benign, 1(0.98%) was premalignant and 18were malignant (17.64%).

Table2:AgeDistributionofthepatients

Agegroup	**0-9**	**10-19**	**20-44**	**45-59**	**≥60**	**Total**
Year	0-9	10-19	20-44	45-59	≥60	Total
2012	0	1	2	0	3	6
2013	0	0	1	0	1	2
2014	0	0	0	1	0	1
2015	0	0	4	1	0	5
2016	0	1	2	1	1	5
2017	0	0	2	0	1	3
2018	0	0	1	0	0	1
2019	0	0	0	0	1	1
2020	0	0	7	1	2	10
2021	0	4	9	5	3	21
2022	0	2	10	0	1	13
2023	0	2	29	1	2	34
Total	0	10	67	10	15	102

Frequency(%)	0	9.8	65.7	9.8	14.7	100

Table3:Occupationofthepatients

Occupation	**Number(N)**	**Frequency(%)**
Students	35	34.3
Trader	9	8.8
Non specified Retired	7	6.8
Civil Servant (including retired)	7	6.8
Unemployed	5	4.9
Security Personnel	4	3.9
Businessmen/women	4	3.9
Farmer	3	2.9
Lawyer	3	2.9
Secretary	3	2.9
Teacher	3	2.9
Caterers	2	2.0
Maritime workers	2	2.0

Others	15	14.7
Total	**102**	**100**

Table4:FrequencyOfBenignTumours(TotalN=83)

Tumour	Frequency	Tumour	Frequency
Acne Keloidalis Nuchae	6(7.22)	Lipoma	1(1.20)
Acrochordon (skin tags)	2(2.40)	Mulloscum Contagiosum	2(2.40)
Dermal Naevus	1(1.20)	Prurigo nodularis	1(1.20)
Dermatofibroma	1(1.20)	Pyogenic granuloma	1(1.20)
Dermatosis Papulosa nigra (DPN)	4(4.81)	Sarcoidosis	1(1.20)
Eccrine Hiddrocystoma	1(1.20)	Sebaceous Cyst	2(2.40)
Eruptive Xanthoma	1(1.20)	Seborhoeic Keratoses	1(1.20)
Haemangioma	1(1.20)	Steatocystoma Multiplex	1(1.20)
Keloids	24(28.91)	Syringoma	4(4.81)

		Warts	20(24.09)
Neurofibromatosis	8(9.64)		
Total	**83(100)**		

The most frequent benign tumour is keloid(28.91%)followed by viral warts (24.09%) and neurofibromatosis (9.64%).Among the warts included genital warts that consisted of 60% (12) of the total warts, plantar warts were 15% (3) andthe rest 25% were common warts (verruca vulgaris). One of the verruca warts were disseminating occurring in multiple sites.

Out of the Neurofibromatosis cases,2 of them (25%) wereplexiform Neurofibromatosis.

The most frequentmalignant tumouris Kaposi sarcoma followed by metastatic skin cancer as shown in table 5 below. RVD and Post-transplant immunosuppression was associated with Kaposisarcoma

Table5:FrequencyofMalignantTumours(N=18)

MalignantTumour	**FrequencyN(%)**
Basal cell Carcinoma	1(5.6)
Kaposi Sarcoma	10(55.5)
Melanoma	1(5.6)
Metastatic skin cancer	3(16.7)
Rhabdomyosarcoma	1(5.6)
Squamous cell carcinoma	2(11.0)
Total	**100**

DISCUSSION

Skin tumoursconstituted 5.3% of cases seen in theDOPC ofRSUTH. This is in contrast to a study done in Lagos where skin tumoursconstituted 19.8% of all dermatologicalconsultations and in South Africa23.73 of all dermatological consultations (7,8).

The reason for this difference may be attributed to the higher number of dermatologists present in these centrescompared toour study centre and hence a higher number of patients seeking specialist care. Cancer awareness and fear ofcancer is another possible reason.

Male to female ratio of those withskin tumors is 1:1, this is comparable to a studies done in the South Western as wellas theSouth Eastern part of the country (1:1.06) and (1:1.14)respectively (9,10).

The equal affectationof both sexes is not surprisingbecause both sexesare equally exposed to UV radiation and other environmental factors.

Both sexes have similar immune systemsand also, genetic mutations that increase cancer risk affect both sexes.

Benign skin tumours accounted for 82.3 % ofthe skin tumor cases seen in our study. Thishigh figure is comparable to other studies done elsewnere in Burkina Fasso, 96.5%, and Lagos, Nigeria, 68.7 %. (11,7).This high value is expected becausebenign skin tumours are generally more common than the malignant types due to genetic predisposition, environmental factors like viruses, cellular differentiation, growth regulation, immune surveillance and early clinical detection.

The commonest benign tumours in this study was keloids(28.91%), followed by viral warts(24.09%) and then neurofibromatosis(9.64%) . A similar study in South Eastern Nigeria also listed soft tissue fibromas like keloids and dermatofibromas as the commonest benign skin tumours(10). This is in contrast to another study in thesubregion where the commonest benign lesions were found to be cutaneous papilloma(7). The reason for the high prevalence of keloidsmay be due to the relatively young age group of patients studied(mean age of patients with tumourswas35.2 years) since keloids areknown to occur in younger persons. Other possibleassociated factors are race and genetic predisposition.

The only premalignant lesion in this study was actinic keratosis. Actinic keratosis may progress to squamous cell carcinoma if left untreated. This was found in a patient with albinism. This is notsurprising because it is rare in blacks due to the protective effect of melanin. It is commoner in Caucasians and albinos. Squamous cell carcinoma was also found in another albino patient in this study which may have arisen from a previous Actinic keratosis.

17.6% of all skin tumours in this study was found to be malignant. This is comparable to a study done in Benin where26.9% of skin biopsy samples were found to be malignant(12). Another study in Lagos Nigeria revealed a prevalence of 31.2% in (7). Theselow figures can be explained by the fact that blacks have a lower prevalence of skin cancers due to the protection by melanin (13,14).

The commonestmalignantskin tumor in this study is Kaposi sarcoma followed by metastatic skin cancer. This is comparable to another study done in the South –South region of Nigeria where Kaposi Sarcoma was also found to be thecommonest skinmalignancy (38.8%)(15).This is in contrast to other studies in the Southwestern part of the countrywhere the commonest skin malignancywas Squamous cell carcinoma followed byMelanoma (7,9).The high incidence of Kaposi Sarcoma in this studymay be attributable to the increasingprevalenceof HIVinfectionin the country and the fact that the south- south zoneof the country has the highest prevalence of HIV nationwide-3.1 % (16).

Another risk factor for Kaposi Sarcoma identified in the study is post renal transplant immunosuppression.This may be attributed to the increasing number of transplant patients in the country due to the establishment ofrenal transplant centres andincreasingnumber of renal transplant recipients returning home after transplant carried out overseas.

CONCLUSION

There is a relative low prevalence of skin tumours among patients attending the skin clinic in RSUTH(5.3%).The Commonest benign tumor is Keloids while the commonest malignant tumour is Kaposi sarcoma.

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