

Clinico- pathological study of patients of skin cancers at tertiary health care centre

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Abstract

Introduction: Appendageal tumors (ATs) are neoplasms which differentiate toward or arise from pilosebaceous apparatus, apocrine gland or eccrine sweat gland. Head-neck region is unique because of its rich distribution of pilosebaceous apparatus, apocrine as well as eccrine sweat glands. **Aims and Objectives:** To study Clinico - Pathological Study of Patients of Skin Cancers at Tertiary health care Centre. **Material and Methods:** The present study of 50 cases of malignant neoplasia of skin, was carried out in the department of surgery, S.R.T.R. Medical College and Hospital, Ambajogai during the period from Jan. 1994 to Dec. 1996 respectively and prospectively. Histopathological confirmation of diagnosis was done. Histopathological examination of lymph nodes whenever thought to be clinically metastasized was carried out. **Result:** The age group 30 to 70 age group is more vulnerable for malignant of skin, For squamous cell carcinoma lowest age reported was 18 years and highest age was 70 years. In males, squamous cell carcinoma was the commonest neoplasm comprising of 24 (80%) cases followed by basal cell carcinoma 11 (91.66%) cases and malignant melanoma 6 (75%) cases. In females, also squamous cell carcinoma was the commonest neoplasms comprising of 6 (66%) cases followed by malignant melanoma 2 (22%) cases followed by basal cell carcinoma 1 (11.11%) case. skin tumours were common in those patients who were exposed more to sunrays 35 (70%) cases rather than those who were less exposed to sunrays 15(30%) cases. Malignant tumours of skin were common in brown coloured patients 27(54.00%) followed by black coloured 19 (38.00%) followed by fair coloured 4 (8%) cases histological grading of squamous cell carcinoma Grade I: Lesions have fewer than 25% undifferentiated cell Grade II: Lesions have about 50% undifferentiated cell Grade III: Lesions have about 75% undifferentiated cells. Grade IV: Lesions have more than 75% undifferentiated cells. 17 (56.66%) cases showed grade II findings on histology followed by 13 (43.33%) cases of grade I histology. Basal cell carcinoma 7 (58.33%) cases reported nodular type and 5 (41.6%) cases reported as a ulcerative type. 8 (66.66%) cases showed moderate lymphocytic stromal response. 2 (16.66%) cases showed sparse and good lymphocytic stromal response. Malignant melanoma was common in present series 4 (50%) cases followed by spindle and polyhedral 2 (25%) cases each stromal response in malignant melanoma according to type of lesions. 2 (25%) cases presented with nodular lesion and 6(75%) cases presented with nodulo ulcerative lesion. 5 (62.5%) cases showed sparse stromal response and 3 (37.5%) cases showed moderate stromal response. **Conclusion:** From our study it can be concluded that The age group 30 to 70 age group is more vulnerable for malignant of skin In males and In females squamous cell carcinoma was the commonest neoplasms, skin tumours were common in those patients who were exposed more to sunrays Malignant tumours of skin were common in brown coloured patients followed by black coloured histological grading of squamous cell carcinoma Grade I: Lesions have fewer than 25% undifferentiated cell Grade II: Lesions have about 50% undifferentiated cell Grade III: Lesions have about 75% undifferentiated cells. Grade IV: Lesions have more than 75% undifferentiated cells.

Keywords: Skin Cancers, Squamous cell carcinoma, Basal cell carcinoma.

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INTRODUCTION

Appendageal tumors (ATs) are neoplasms which differentiate toward or arise from pilosebaceous apparatus, apocrine gland or eccrine sweat gland.¹ Head-neck region is unique because of its rich distribution of pilosebaceous apparatus, apocrine as well as eccrine sweat glands. It has also been previously documented that ATs predominate over head-neck area.¹ Clinical diagnosis of different entity is often difficult, as most of the ATs present as asymptomatic papules or nodules. Anatomic location, number and distribution of lesions

provide important clue but histopathology is invaluable in confirmation of the diagnosis.² Majority of these tumors are benign^{3,4} and the malignant ones are usually irregularly shaped, solitary, rapidly growing plaques or nodules that have a tendency to ulcerate. Risk of malignant degeneration varies with individual lesions.² Local recurrence is well recorded but metastases is rare with the exception of the malignant eccrine and apocrine gland derived tumors and sebaceous carcinoma.³ There are literally hundreds of neoplasms that can arise from cutaneous appendages and they are known since long. The skin appendagealtumours (ATs) encompass a wide variety of tumours clinically presenting as papules and nodules and with histologically distinct features.^{4,5} Appendageal tumors (ATs) are neoplasms whichdifferentiate toward or arise from pilosebaceous apparatus, apocrine gland or eccrine sweat gland.⁴ Majority of these tumors are benign.⁶ They are basically classified into four groups: tumors with differentiation towards hair follicles, sebaceous glands, eccrine or apocrine glands. These tumors are usually benign, but rarely malignancy can supervene.⁷ Local recurrence is well recorded but metastases are rare with the exception of the malignant eccrine and apocrine gland derived tumors and sebaceous carcinoma. Clinical diagnosis of different entity is often difficult, as most of the appendagealtumours present as asymptomatic papules or nodules. Anatomic location, number and distribution of lesions provide important clue but histopathology is invaluable in confirmation of the diagnosis.⁸

MATERIAL AND METHODS

The present study of 50 cases of malignant neoplasia of skin, was carried out in the department of surgery, S.R.T.R. Medical College and Hospital, Ambajogai during the period from Jan. 1994 to Dec. 1996 respectively and prospectively. Frequency distribution (Age, Sex and Sitewise) was studied in all neoplasms. In every case, detailed history was taken and clinical examination was carried out. After admission, routine haemogram, serological test, blood studies for sugar and urea and radiological examination for involvement of bone was done. Masson’s Fontana test was carried out in cases of malignant melanoma and was studied. Edge biopsy was obtained in every case and if needed excision or amputation or skin grafting was performed. Histopathological confirmation of diagnosis was done. Histopathological examination of lymph nodes whenever thought to be clinically metastasized, was carried out. On the basis of the degree of differentiation of the cells, nature of the cells, morphology of nuclei and number of mitotic figures, grading of the tumour was done. Similarly, according to the arrangements of cells type of

cells and according to different histopathologic characteristic of the particular tumour, subtyping of the tumour was done. According to the history, clinical features, Investigations and histopathological findings the correlation ship between them was carried out and from this, prognosis was determined. The patients were advised to attend the outpatient Department for follow-up.

RESULT

Table 1: Age Group wise and Sex wise Distribution of Malignant Tumors of Skin

Age group In years	Total No. of cases	Male	Female
0-9	00	00	00
10-19	01	01	00
20-29	01	01	00
30-39	07	03	03
40-49	09	08	02
50-59	20	18	02
60-69	11	09	02
70-79	01	01	00
Total	50`	41	09

Table no. 1 shows age GroupWise and sixties distribution of malignant tumours of skin. The age group 30 to 70 age group is more vulnerable for malignant of skin. For squamous cell carcinoma lowest age reported was 18 years and highest age was 70 years. 8181

Table 2: Typewise and Sexwise Distribution of Malignant Tumoursof Skin

Type	Total No of Cases	Male	Female
SCC	30	24	06
BCC	12	11	01
MM	08	06	02
Total	50	41	09

SSC- Squamous cell carcinoma, BCC- Basal Cell carcinoma, MM- Malignant melanoma. Table no.2 shows sexwise distribution of different types of malignant tumours of skin. Squamous cells carcinoma is most commonest 30 (60%) cases followed by basal cell carcinoma 12(24%) cases followed by malignant melanoma 8 (16%) cases. In males, squamous cell carcinoma was the commonest neoplasm comprising of 24 (80%) cases followed by basal cell carcinoma 11 (91.66%) cases and malignant melanoma 6 (75%) cases. In females, also squamous cell carcinoma wad the commonest neoplasms comprising of 6 (66%) cases followed by malignant melanoma 2 (22%) cases followed by basal cell carcinoma 1 (11.11%) case.

Table 3: The occupation was regarded as to whether patient was working for prolonged time under sun or hot

Type of tumour	Exposure more To sunrays	Exposure less To sunrays	Total
SCC	20(66.66%)	10 (33.33%)	30(100%)
BCC	09(75.00%)	03(25.00%)	12(100%)
MM	06(75.00%)	02(25.00%)	08(100%)

SSC- Squamous cell carcinoma, BCC- Basal Cell carcinoma, MM- Malignant melanoma. Table No. 3 shows the relationship of exposure to sunrays and malignant tumours of skin. Thus the skin tumours were common in those patients who were exposed more to sunrays 35 (70%) cases rather than those who were less exposed to sunrays 15(30%) cases.

Table 4: Shows the relation of colour of patient to malignant tumour of skin

Colour of patient	No. of cases	Percentage
Fair	04	08.00%
Brown	27	54.00%
Black	19	38.00%
Albino	00	00.00%

The pigmentation of skin of patient plays vital role in malignant tumours of skin. Thus malignant tumours of skin were common in brown coloured patients 27(54.00%) followed by black coloured 19 (38.00%) followed by fair coloured 4(8%) cases. There was no case of albino.

Table 5: Histological grading of squamous cell carcinoma

Total No. of SSC Cases	Grade I	Grade II	Grade III	Grade IV
30 (100%)	13 (43.33%)	17 (56.66%)	00(00.00%)	00(00.00%)

Table No.5 shows distribution of histological grading of squamous cell carcinoma. Broder's criteria for histological grading of squamous cell carcinoma. Grade I: Lesions have fewer than 25% undifferentiated cell Grade II: Lesions have about 50% undifferentiated cell Grade III: Lesions have about 75% undifferentiated cells. Grade IV: Lesions have more than 75% undifferentiated cells. 17 (56.66%) cases showed grade II findings on histology followed by 13 (43.33%) cases of grade I histology.

Table 7: Distribution of histological variants of basal cell carcinoma

Histological variant of BCC	No. of cases	Percentage
Solid type	06	50.00
Basi-squamour pigmented	01	8.33
morphoeic	04	33.33
	01	8.33

Table No. 7 shows stromal response in basal cell carcinoma according to type of lesion. 7 (58.33%) cases

reported nodular type and 5 (41.6%) cases reported as a ulcerative type. 8 (66.66%) cases showed moderate lymphocytic stromal response. 2 (16.66%) cases showed sparse and good lymphocytic stromal response.

Table 8: Distribution of histological variants of malignant melanoma

Type	No. of cases	Percentage
Alveolar	04	50.00
Spindle	02	25.00
polyhydral	02	25.00
pleomorphic	00	00.00

Table No. 8 Shows distribution of histological variant of malignant melanoma. Thus alveolar type of malignant melanoma was common in present series 4 (50%) cases followed by spindle and polyhedral 2 (25%) cases each. Plaeomorphic type of malignant melanoma was absent in present series.

Table 9: Stromal Response in Malignant According To Type of Lesion

Type of lesion	Sparse	Moderate	Good
Nodular	01 (50%)	01 (50%)	00
Nodulo-Ulcerative	04 (66.66%)	02 (33.33%)	00
Total	05 (62.5%)	03 (37.5%)	00

Table no.9 Shows stromal response in malignant melanoma according to type of lesions. 2 (25%) cases presented with nodular lesion and 6(75%) cases presented with modulo ulcerative lesion. 5 (62.5%) cases showed sparse stromal response and 3 (37.5%) cases showed moderate stromal response.

DISCUSSION

Few large-scale epidemiologic studies have focused on appendageal skin tumors. Most ATs are not common enough for pathologists to gain a ready familiarity with them. ATs, nevertheless, are not rare tumors. In this study, the histopathological prevalence of ATs over a 4-year-period among 30,000 pathology records was 3.3% (1016). Other authors have reported a lower prevalence; only 112 ATs were reported over a 13-year survey of consecutive biopsies in Malaya¹³. In another study in Nigeria¹⁴, 52 ATs were seen over a 16-year period, accounting for 0.9% of all cutaneous tumors. In a similar descriptive case series of 2637 dermatopathological cases in Paraguay, 36 ATs (1.4%) were identified¹⁵ In the present study, basal cell carcinoma was most commonly seen in 5th and 6th decade of life. Cases were distributed in the range of 45 years to 65 years. The mean age was found to be 55 years, which was comparable to mean age reported as 57.3 years by Chreck 1941, 50.1 years by Budhreja *et al*⁹ 1972, 50 years by Suryawnashi¹² 1971, and 54 years by Solanki¹¹ *et al* 1989. In the present study,

male:Female ratio for basal cell carcinoma found to be 11:1. This ratio was much higher than male :Female ratio reported by 2.6:1 by budhreja *et al*⁹ (1972) and 1.26:1 by Solanki *et al*¹¹(1989).The proportion of basal cell carcinoma and squamous cell carcinoma in the study was 12:30 i.e. 1:2.5.Similar observations were made by most of the Indian authors : Paymaster *et al*¹⁰ (1:2) and Suryawanshi¹² (1:2.3).The basal cell carcinoma occurred more commonly in brown coloured 8 (66.66%) cases than black coloured 4 (33.33%) cases. This is well in correlation with the western countries as these less pigmented people, patients are more exposed to actinic rays. Histologically most of the lesion showed clubs of malignant cells infiltrating dermis with peripheral palisading. Table no.26 shows histological variants of basal cell carcinoma The solid type was commonest variant comprising of 50% lesions followed by pigmented type 33.33%, followed by Basi squamous and Morphoea each 8.33% .These figures were comparable with those reported by Suryawanshi *et al*¹² (1979). No correlation is observed between the histological variants and the lesions. In basal cell carcinomas, 8 (66.66%) cases showed moderate lymphocytic stromal response, 2 (16.66%) cases showed good lymphocytic stromal response and 2 (16.66%) cases showed sparse lymphocytic stromal response.Basal cell carcinoma over scalp. Case No.50 was of 50 years male who had a nodular swelling over scalp. He brown colored with bald head and was Watchman in private factory.

CONCLUSION

From our study it can be concluded that The age group 30 to 70 age group is more vulnerable for malignant of skin.In males and In females squamous cell carcinoma was the commonest neoplasms, skin tumours were common in those patients who were exposed more to sunrays Malignant tumours of skin were common in brown coloured patients followed by black coloured.histological grading of squamous cell carcinoma Grade I: Lesions have fewer than 25% undifferentiated cell Grade II: Lesions have about 50% undifferentiated cell Grade III: Lesions have about 75% undifferentiated cells. Grade IV: Lesions have more than 75% undifferentiated cells.

REFERENCES

1. Mackie RM, Calonje E. Rook's Textbook of Dermatology. In: Burns T, Breathnach S, Cox N,

- Griffiths C, editors. Tumors of the Skin Appendages. 7th ed. London: Blackwell Publishing Company; 2004. pp. 1-34.
2. Stantaylor R, Perone JB, Kaddu S, Kerl H. Appendage Tumors and Hamartomas of the Skin. In: Wolff K, Goldsmith L, Katz S, Gilchrest BA, Paller AS, Leffell DJ, editors. Fitzpatrick's Dermatology in General Medicine. 7th ed. New York: McGraw Hill; 2008. pp. 1068-87.
3. Khandpur S, Ramam M. Skin Tumors. In: Valia RG, Valia AR, editors. IADVL Text book of Dermatology. 3rd ed. Mumbai: Bhalani Publishing House; 2008. pp. 1475-38.
4. Mackie RM, Calonje E. Tumours of the Skin Appendages. In: Burns T, Breathnach S, Cox N, Griffiths C, editors. Rook's Textbook of Dermatology. 7th ed. London: Blackwell Publishing Company.2004; 1-34.
5. Stantaylor R, Perone JB, Kaddu S, Kerl H. Appendage Tumors and Hamartomas of the Skin. In: Wolff K, Goldsmith L, Katz S, Gilchrest BA, Paller AS, Leffell DJ, ed. Fitzpatrick's Dermatology in General Medicine. 7th edition. New York: McGraw Hill; 2008; 1068-87.
6. Khandpur S, Ramam M. Skin Tumors. In: Valia RG, Valia AR, editors. IADVL Text book of Dermatology. 3rd ed. Mumbai: Bhalani Publishing House.2008; 1475-38.
7. Samaila MO. Adnexal skin tumors in Zaria, Nigeria. Ann Afr Med. 2008; 7:6-10.
8. Klein W, Chan E, Seykora J T. Tumours of the epidermal appendages. In: Elder DE, Editor in Chief. Lever's histopathology of the skin. 9th ed. Philadelphia, PA: Lippincott Williams and Wilkins. 2005; 867-926.
9. Budhreja S.N., Velayudhan Pillai V.G. and perriyanayagam W.J.: malignant neoplasms of skin in Pondicherry (A study of 102 cases):. Ind. J. Cancer: 9: 284-295, 1972.
10. Paymaster J.C. :Cancer and its distribution in India.; Cancer : 17:1026-1034, 1964
11. Solanki R.L., Arora H.L., Anand V.K., Gaur S.K. and Gupta R.: Basal cell epithelioma (A Clinicopathological study of 172 Cases): Ind. J. Dermatol. Venerol.: 55:38-53, 1989
12. Suryawanshi:Neoplasms of the skin, dissertation for M.S. (surg.) Exam. M.U. (1979).
13. Jayalakshmi P, Looi LM. Cutaneous adnexal neoplasms in biopsy specimens processed in the Department of Pathology, University of Malaya. Ann Acad Med Singapore 1996; 25: 522-5.
14. Samaila MO. Adnexal skin tumors in Zaria, Nigeria. Ann Afr Med 2008; 7: 6-10.
15. Gonzalez L, Di Martino B, Rodriguez M, Knopfmachler O, Lourdes Bolla, Recalde J. Clinical and epidemiological study of adnexal tumours at the Dermatology Department of the Medical Sciences Faculty, National University of Asuncion. Paraguay, 2002-2008. Folia Dermatol Peru 2009; 20: 135-9.

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