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Benign Tumors of Skin

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Introduction- The skin is a complex and the largest organ in the body. Wide range of diseases can develop from the skin including tumors from surface epidermis. The vast diversity of these lesions and descriptive data, often overlapping produces confusion in the area of nomenclature and difficulty in diagnosis.¹ Histopathological study is valuable means of diagnosis in dermatology. But it has limitations; sometimes, in case of tumors definitive diagnosis cannot be made.² The distinction between benign and malignant neoplasm are rather more difficult to define when they appear in skin than when found elsewhere³ and histopathological examination is frequently required to establish a definitive diagnosis. Diagnosis of any skin tumors can be done by correlating clinical features and histological features, which can be supported by histochemistry, immuno-histochemistry and electron microscopy.

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Benign Tumors of Skin

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I. INTRODUCTION

The skin is a complex and the largest organ in the body. Wide range of diseases can develop from the skin including tumors from surface epidermis. The vast diversity of these lesions and descriptive data, often overlapping produces confusion in the area of nomenclature and difficulty in diagnosis.¹

Histopathological study is valuable means of diagnosis in dermatology. But it has limitations; sometimes, in case of tumors definitive diagnosis cannot be made.²

The distinction between benign and malignant neoplasm are rather more difficult to define when they appear in skin than when found elsewhere³ and histopathological examination is frequently required to establish a definitive diagnosis.

Diagnosis of any skin tumors can be done by correlating clinical features and histological features, which can be supported by histochemistry, immunohistochemistry and electron microscopy.

II. METHODOLOGY

This study of "Tumors of the skin" was carried out from November 2005 to April 2007 over a period of 18 months.

Inclusion Criteria: All benign and malignant tumors of skin were included.

Table 1 : Incidence of skin tumors

Total number of tumors	Number of skin tumors	Percentage
790	54	6

Of the 54 cases, 14 were diagnosed as benign tumors and 40 as malignant tumors. The benign tumors constituted 25.92% and malignant tumors constituted 74.07%.

The study also showed there was male predominance and the male to female ratio was 2.7:1.

Exclusion Criteria: All non-neoplastic lesions and mesenchymal tumors were excluded.

Brief clinical history and findings were noted. Gross features were examined; Incisional or excisional biopsy study was done to assess nature of tumors, and fixed all specimens in 10% formalin for 12-36 hours. Further, tissue was processed and embedded in paraffin blocks. Sections of 6 micron thickness were taken and stained with hematoxylin and eosin and studied. Special stains were used whenever necessary. According to WHO classification of skin tumors (1974)⁴ cases were classified into:

1. Epidermal tumors and tumors-like lesions
2. Precancerous lesions

Infective conditions were omitted

Statistical Methods Applied

1. Cross tabs Procedure
2. Chi-square test
3. Descriptive statistics

III. RESULTS

During the period of 18 months from November 2005 to April 2007, out of the total surgical specimens received in Department of Pathology, for histopathological study 790 were of tumors and out of these 54 were skin tumors.

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Table 2 : Age incidence of tumors of skin

Age in years	Number of cases	Percentage
0-19	2	4
20-29	2	4
30-39	1	2
40-49	13	23.5
50-59	11	20
60-69	13	23.5
70-79	10	19
80-89	2	4
Total	54	100

$$\chi^2 = 30.741; p < 0.000 \text{ (Highly Significant)}$$

In the present study the peak age group was between 5th and 7th decade.

Table 3 : Sex incidence of tumors of skin

Sex	Number of cases	Percentage
Male	40	74
Female	14	26
Total	54	100

$$\chi^2 = 12.519; p < 0.000 \text{ (Highly Significant)}$$

The study showed there was male predominance with the male to female ratio of 2.7:1.

a) Benign tumors of skin

In the present study, benign tumors amounted to 14 (25.92%) out of total 54 skin tumors.

Table 4 : Incidence of benign tumors of skin

Tumor	Number of cases	Percentage
Epidermal		
Seborrheic Keratosis	8	57
Keratoacanthoma	4	29
Warty dyskeratosis	2	14
Total	14	100

b) Benign tumors of epidermis

i. Seborrheic keratosis

In the present study, 8 cases (57%) of Seborrheic keratosis were encountered, out of which

one is melanoacanthoma. Two male patients were between age group of 60-65 years.

Gross examination showed tumor within the epidermis limited by horizontal line. (Figure 4A and 4B)



Figure 4A : Seborrheic keratosis-Gross: shows excised tumor arising from the skin surface



Figure 4B: Cut section of A showing tumor limited to the epidermis above a horizontal line

Histologically, all the 8 lesions were of acanthotic type showing proliferation of basaloid cells with horn cysts and infiltration of dermis with chronic

inflammatory cells. One case showed melanin pigment

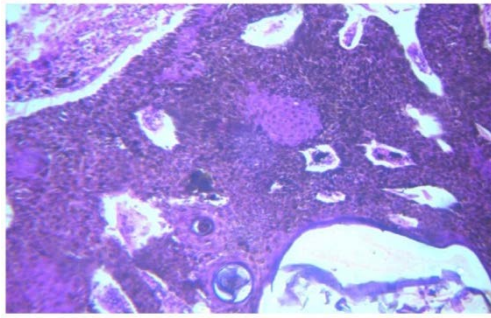


Figure 5 : Seborrheic keratosis- HP: Sheets of basaloid cells with increased melanocytes. Intervening horn cysts are also made out(100X)

ii. *Keratoacanthoma*

Four cases of keratoacanthoma were encountered. These were solitary lesions over the exposed area in old males of few months duration.

Histologically, it showed a central keratin filled crater and proliferation of epidermis from the base of the crater into the dermis. Dermis showed chronic inflammatory cell infiltrates.

iii. *Warty dyskeratoma*

Two cases of warty dyskeratoma were encountered. These were solitary lesions over the scalp in old females.

Histologically, it showed hyperkeratosis, acanthosis, parakeratosis and cup shaped invagination of the epidermis filled with keratinous material. Dermis showed chronic inflammatory cell infiltrates.

IV. DISCUSSION

Skin tumors constitute a small but significant proportion of patients with cancer. Skin tumors are an ideal subject for study from clinical, morphological and therapeutic point of view and are so ubiquitous that they can affect people of all ages.

In this study, the WHO classification of skin tumors⁵ was followed. All non-neoplastic lesions and dermal tumors were excluded from this study. However, keratoacanthoma and warty dyskeratoma have been included under benign tumors of epidermis following the recent classification of tumors of epidermis by WHO.⁶

During this 18 month study period (November 2005 to April 2007) a total of 790 specimens of neoplasms were received in the Department of Pathology, K.R. Hospital, Mysore. Out of these, tumors of epidermis, epidermal adnexal and melanogenic system were 54, constituting 6.83%.

In the present study it was observed that malignant epidermal tumors were the most common (61%), followed by benign tumors of epidermal appendages (13%), benign tumors of epidermis (11%), malignant melanogenic tumors (9%), malignant adnexal neoplasms (4%) and benign melanogenic tumor (2%).

Of these 54 cases studied, the ratio of benign (14) to malignant tumors (40) was 1:2.85.

In India, skin cancers constitute about 1-2% of all diagnosed cancers. Various cancer registries in India reported cumulative incidence of skin cancer varying from 0.5 to 2 per 1,00,000 population.⁷

V. CONCLUSION

Skin tumors constitute a small but significant proportion of patients with cancer. The anxiety of the patients to differentiate benign from malignant tumors, can be solved by histopathology. Histopathological study is one of the most valuable means of diagnosis in dermatology and diagnosis of skin tumors can be done by correlating clinical features gross and histological appearances. In this study advance age and male preponderance seen, maybe because of excess sun and irritants exposure.

In some cases rare entities and problems of differential diagnosis encountered maybe solved with the help of histochemical and/or electron microscopic studies.

VI. SUMMARY

Out of 54 cases, histopathologically 40 were diagnosed as malignant and 14 as benign lesions.

The ratio of malignant to benign tumors was 2.8:1. The peak incidence of tumors was in 5th and 6th decades with a male to female ratio of 2.8:1.

Of the benign epidermal tumors, 8 (57%) were seborrheic keratosis 4(29%) keratoacanthoma and 2(14%) warty dyskeratoma.

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