COMMON MALIGNANT SKIN TUMOUR

ESSAY

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(General Suergery)

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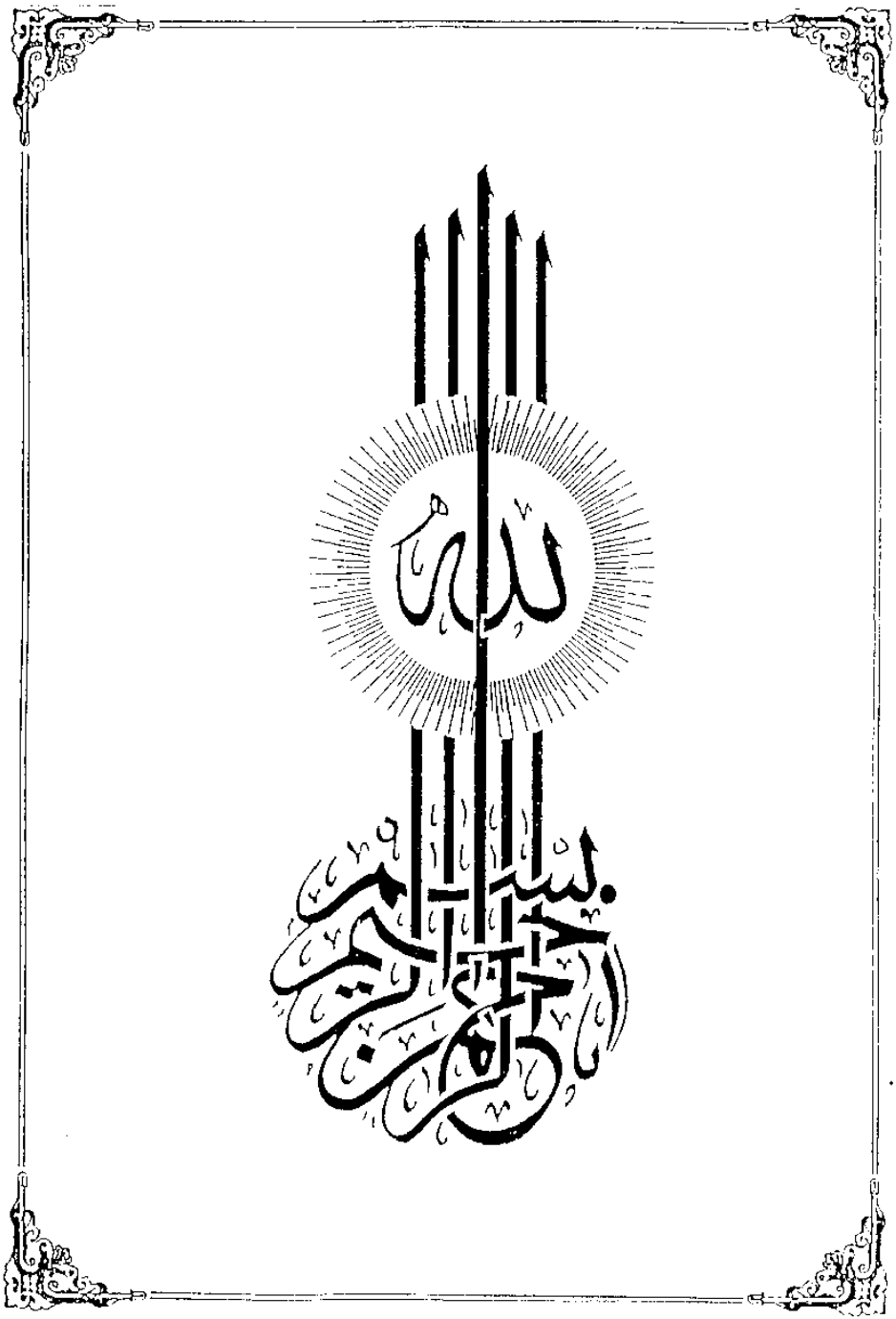

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INTRODUCTION

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Neoplasms of the skin are the most common cancers in human beings where the population is predominantly white. They represent about 23% of all malignancies in males (Del regato et al., 1977).

In Egypt skin cancer represent about 5% only of all malignancies. Squamous cell carcinoma is the most common skin cancer in Egypt (53%) closely followed by basal cell carcinoma 41%. Malignant melanoma is a rare tumour in Egypt. It represent, only 1% of skin tumours (El-Sayed et al., 1985).

The present work is a review about common malignant skin tumours namely squamous cell carcinoma, basal cell carcinoma and malignant melanoma.

Epidemiology of each tumour was discussed for incidence in relation to sex, age geographical distribution and location of the lesion. The etiological factors which are responsible for the causation of each tumour were discussed with special attention to carcininogenics and precancerous lesions.

Regarding the pathology, cell types of each tumour, microscopic picture and gross appearance were reviewed. Pathological variants were discussed with clinicopathological correlations.

Clinical presentation and differential diagnosis of each tumour were discussed giving a good scheme for dignosis.

Different therapeutic measures were reported including surgical treatment, radiotherapy, chemotherapy, chemosurgery and others. Advantages and disadvantages of each line of treatment were discussed to help for the choice of the most suitable line of treatment for a particular case.

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HISTOLOGY OF THE SKIN

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The normal skin is composed of two distinct portions, an epithelial portion called epidermis and a connective tissue portion called dermis.

I- The epidermis :-

It is a purely cellular tissue in which there is constant slow movement from inside outwards. It varies in thickness from 0.06 mm. on the eye lids to 0.8 mm. on the palms and soles. Its inner surface is indented by dermal papillae. The epidermis is composed of 4 layers of cells which represent different stages of maturation and evolution of basal cells into cornified cells rather than different types of cells.

1) The basal layer :-

It seperates the dermis from, the epidermis. It is formed of 2 types of cells :

a- Basal cells : They are columnar and their longitudinal axes are vertical. They are united to one another and to the overlying cells by intercellular bridges. They are active mitotically

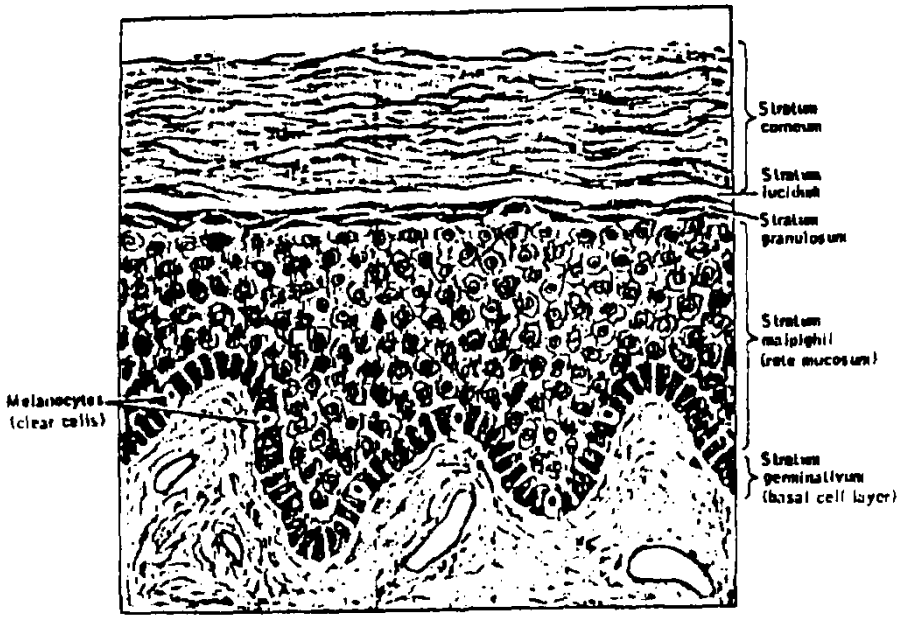


Fig.(1) A diagram to illustrate the layers of the epidermis. From (Abo El Naga, 1970).

and metabolically the basal cells are the source of keratinocytes and are the origin of basal cell cancer (Sullivan and Epstein, 1963).

b- Melanocyte cells : form 20% of the basal layer and are derived from neural crest. They produce melanin and excret it into keratinocytes along the dendrites.

2) The prickle cell layer (stratum malpignii) :- The cells of this layer are polygonal in shape with rounded nuclei but they are gradually flattened as they approach the surface (Abo El-Naga, 1970).

This layer is called also squamous cell layer. Their cells are separated by spaces that are traversed by intercellular bridges. Examination of the epidermis with the polarizing microscope reveals in the cytoplasm of basal and prickle cells numerous doubly refractile tonofibrils forming a tridimentional framework around the nucleus and radiating out to the cell border.

These tonofibrils are precursors of keratin. If a gold stain is employed on unfixed section one may observe gold impregnated cells with dentretic processes interspersed between the cells of the prickle layer. These cells, called langhan's cells, have no inter cellular bridges, no tonofibrils and no melanin. Only few years ago it was generally accepted that the langhan's cells was an "effeet melanocytes". The prickle cell layer is the layer from which squamous cell carcinoma arises. (Zelickson, 1964).

3) The Granular layer (stratum granulosum) :
Its cells are diamond shaped and filled with keratohyaline basophilic granules. The thickness of this layer varies from one to four cells. They are flattened with their long axes parallel to the surface. The keratohyaline granules are responsible for the process of keratinization.
The granular layer is absent in the lips, mouth and vagina.

4) The horny layer (stratum corneum) :

It is comosed of anuclear dead cells, keratin, surface lipids and dirts. These cells are continuously desquamated but their is a balance between desquamation and cell production. Therefore its thickness remains the same. The horny layer is well developed only on the palms and soles (Last, 1973).

Epidermal appendages :-

They are composed of sweat glands, sebaceous glands and hair follicles.

The sweat glands :-

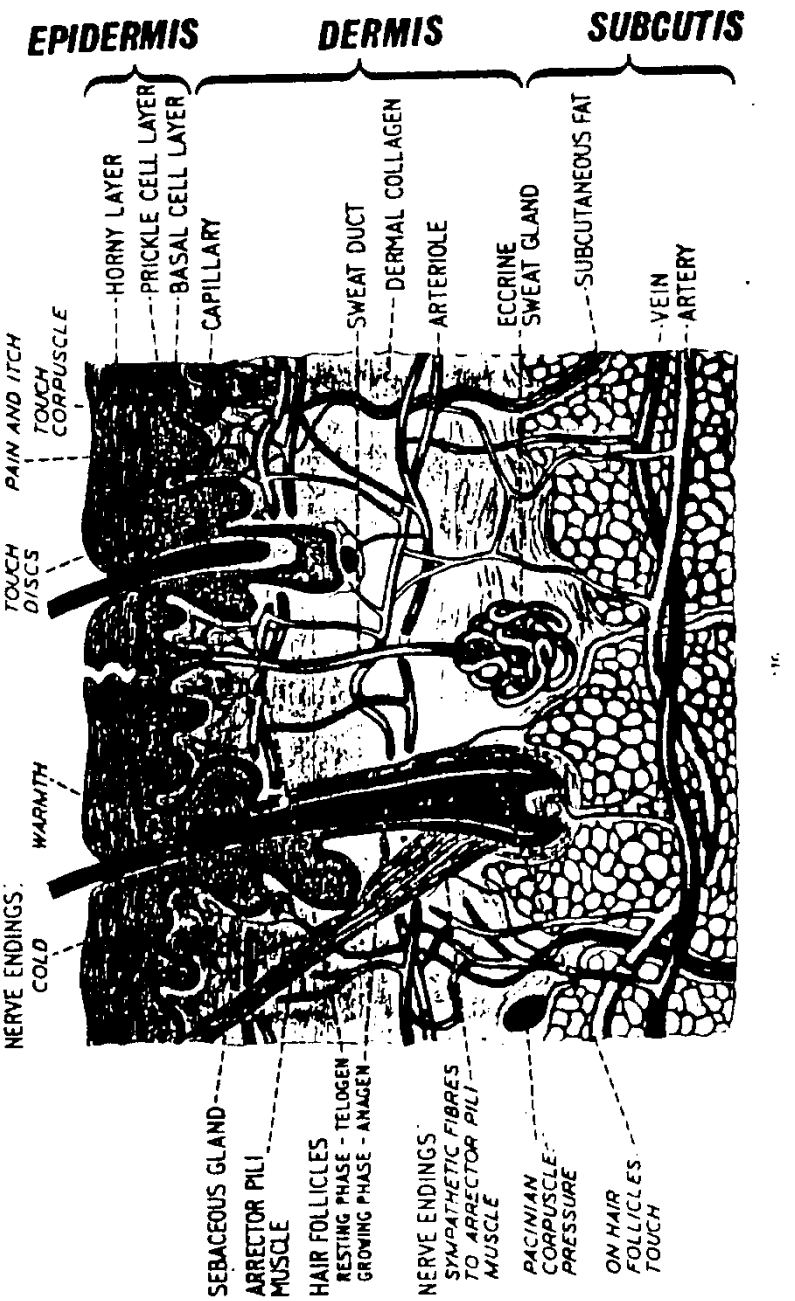
1) Eccrine glands :-

They are composed of 3 segments, a secretory portion, an intradermal sweat duct and an intraepidermal sweat duct. They are simple coiled tubular glands. Their cells are cylinderical and they contain glycogen which disappears on sweating.

2) Apocrine glands :-

They are located mainly in axilla, groin, around nipple, in the anogenital region and as a

Figure 2 : Structure of the skin and contents of dermis.



From Abo-El-Naga, (1970)

modified glands in the external ear, in the eye lid and in the breast. They are tubular glands which open into hair follicles above the sebaceous glands, not directly to the surface. Therefore when infected they become resistant to local antibiotics.

2) Sebaceous glands :-

They are present every where on the skin except on the palms and soles. They are alveolar holocrine glands, that is they have no lumen and their secretion is formed by desquamation of their cells. The secretion is evacuated through the sebaceous ducts into the pilosebaceous follicels. Each sebaceous gland is composed of several lobules leading into a common excretory duct composed of stratified squamous epithelium.

3) The hair follicles :-

The hair follicle is composed of three major portions, the hair shaft, the inner hair sheath and the outer hair sheath. The hair shaft and seath are embeded in hair follicle . The