

## SKIN CANCER (EXCLUDING MELANOMA)

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### SUMMARY:

A brief review is given of the incidence, aetiology, and the pathological presentation of the commoner forms of skin cancer with particular reference to its occurrence in the Maltese islands. Methods of treatment are discussed.

### EPIDEMIOLOGY and AETIOLOGY:

Skin cancer accounts for a large percentage of malignant disease in general. Most published figures about incidence are bound to be inaccurate and incomplete because many skin cancers are treated in private clinics without histological verification and without being notified. However, if the data available in *Cancer Incidence in Five Continents, Volume 2*, are re-arranged (Gordon & Silverstone), it is possible to show that when persons of Celtic and Anglo-Saxon ancestry are exposed to sunlight in different zones of latitude from high to low, the incidences of skin cancer range from 5 per 100,000 in Sweden to well over 100 per 100,000 in Queensland, Australia. On the other hand, members of the black races, who as a general rule live in the lower latitudes, have a skin cancer incidence of less than 5 per 100,000 of the general population. This also applies to the

Japanese whether they are domiciled in Japan or in Hawaii.

Examination of the Malta Cancer Registry records show that during the five year period 1969 to 1973 a total of 448 primary skin cancers (excluding melanomas) were registered. This gives an annual incidence of 27 per 100,000 of the general population. Table 1 compares our own incidence with that obtained in some areas of the world which are warm and sunny and to which people from the British Isles and Northern Europe migrated (Doil, Muir & Waterhouse, 1970).

There are obviously certain factors, partly genetic and partly environmental, which influence the development of skin cancer. Silverstone and Searle (1970) showed very clearly that reaching a ripe old age and having a history of keratosis are the factors most likely to be associated with a positive history of skin cancer. Other factors are a susceptibility to sunburn and residence in the tropics as against the subtropics. Outdoor occupation and a Celtic ancestry exercise less influence than is usually believed. No such scientific influence than is usually believed. No such scientific aetiological studies have been carried out in Malta. Examination of the

TABLE 1

Skin Cancer-Annual incidence per 100,000 by sex.

Country	Male	Female
South West England	28	15
Malta	40	16
South Africa, Cape Whites	133	72
Texas, U.S.A., Non-Latins	168	106
Queensland, Australia, Whites	265	156

Malta Cancer Registry records however does confirm that 89% of all the skin cancer patients were above the age of 50 when diagnosed and that there was an associated keratosis in over 60% of them.

Multiple skin cancers are common. Bray (1939) noted that out of every 100 patients with skin cancer at the Sidney Hospital Radium Clinic, 30, after a period of time, had to be treated for new lesions. Up to date, of all the patients with skin cancer treated at our Radiotherapy Department between 1969 and 1971, 12% have already required treatment for other new skin cancers. These percentages do not, of course, refer to patients originally presenting with multiple lesions.

#### **PATHOLOGY:**

The vast majority of skin cancer are basal cell or squamous cell carcinomas. The basal-squamous cell carcinomas should, to all intents and purposes, be considered as squamous cell cancers as they are of equal potential danger. Adenocarcinomas arising from the skin appendages are extremely rare. The exact relative proportion of the various histological types is uncertain due to the fact that in very few large series have all the lesions been histologically examined. Lighthouse, Korpff & Garfinkel (1965), have shown that a clinical diagnosis, even in experienced hands, of basal cell carcinoma is found on histological examination to be squamous cell carcinoma in up to 25% of cases. In our own series, out of a total of 448 consecutive skin cancers, the ratio of Basal cell to Squamous cell cancers was as 2.56

is to one. Table 2 gives a breakdown of the various histological types. It must be appreciated that these figures are partly based on a clinical diagnosis as histological confirmation was only obtained in 64% of cases.

Metastasis from squamous cell skin cancer to regional lymph nodes is not uncommon. Distant metastasis is much rarer; in our own series it was only recorded in one individual. Basal cell cancers can very rarely metastasize. Burman (1969) surveyed the world literature and found a record of about 50 patients in whom there was histological confirmation of this. In our own small series none of the Basal cell cancers metastasized either to glands or distantly.

Deaths from skin cancer are now rare. The case mortality rate is said to be less than 1%. In our series there were only two fatalities. One was in an old lady with an advanced B.C.C. which had eroded most of the nose and facial bones who died of a massive haemorrhage; the other death occurred in a man with S.C.C. who after three years of treatment for his primary lesion developed metastasis in the cervical and supraclavicular nodes and later generalized distant metastasis.

#### **TREATMENT:**

##### **1. Prevention:**

Prevention must be based on two premises:

- a) Ultraviolet radiation is the major aetiological factor in the development of skin cancer (Urbach, 1969).
- b) Normal persons show a wide varia-

TABLE 2.

Skin Cancer Pathological types by sex.

	Male	Female	Both Sexes
Squamous Cell	96	28	124
Basal Cell	196	105	301
Basal-Squamous Cell	16	5	21
Other	0	2	2
Total	308	140	448

tion in their degree of susceptibility to developing skin cancers. Fitzpatrick, Pathak & Lane Brand (1972) mention the following characteristics which predispose to susceptibility:

In Children: Light skin that sunburns easily and does not tan.

Freckles.

Red Hair.

In Adults: Light skin that sunburns easily but does not tan.

Freckles.

Red hair.

Signs of solar degeneration such as solar keratosis, telengectasis, connective tissue degeneration and solar or 'senile' lentigo.

Many skin lotions or creams which screen off the ultraviolet radiation from the sun are available. Most of them contain para-aminobenzoic acid in ethanol. Physicians should learn to recognize those persons who are most at risk of developing skin cancer and advise them to use one of these preparations from early youth. Patients who already have solar keratosis should have this treated with a 5-Fluorouracil skin preparation once their keratosis is cured, they should be encouraged to apply an ultraviolet barrier cream prophylactically.

## 2. Surgery and Radiotherapy:

There is no doubt that both surgery and radiotherapy can effectively cure the vast majority of skin cancers. Whether surgery is superior to radiotherapy or vice-versa is not a valid subject for debate. Both modalities have their indications and contraindications the choice of one or the other or of a combination of both depending on a large number of factors such as age of patient, size and site of the lesion, its dept of infiltration and the quality of the skin around it. Perhaps the most important factor is the skill of the surgeon or the radiotherapist and the amount of time, care and individual attention which they are prepared to devote in order to achieve the final aim which is the cure of the patient of his disease with as little discomfort as possible and with the likelihood of producing the best possible

cosmetic result. Both surgeons and radiotherapists should be aware of their limitations and they should discuss new patients jointly if this aim is to be achieved.

The old idea that one should in all cases "first try radiotherapy as surgery could always be used later if this fails" was exploded by Rank who showed that out of 226 lesions treated primarily by surgery the recurrence rate was only 1.3% whereas in 197 recurrent lesions (mostly radiotherapy failures) the recurrence rate was 15%. The opposite also holds good in the sense that radiotherapy is less successful when dealing with surgical failures due to the diminished vascular supply.

Small, discreet, superficial basal or squamous cell carcinomas can be destroyed equally well by excision or by radiotherapy. On the whole surgery is to be preferred because it is cheaper, quicker and also because the surgical scar will withstand further exposure to the atmosphere better than a radiation scar. This is a most important factor in the younger patients. Old patients may find it difficult to remain still during radiotherapy and they may also find it difficult to attend for repeated daily treatments.

Larger lesions and especially those lesions which occur in sites such as the eyelids, the periorbital area and the medial triangle of the cheek are usually dealt with by radiotherapy. Here surgical excision would almost invariably require plastic repair. This also applies to the external nose if the lesion is larger than a few millimetres. Surgery is usually to be preferred in areas such as the perineum, the vulva, the scrotum and the hands and feet as these tolerate irradiation badly.

Where good plastic surgical facilities are available, the large deeply penetrating tumours should be dealt with surgically as the long term results, both curative and cosmetic, are likely to be better. Where no such service is available, radiotherapy using deep X-rays or in some instances telecobalt, can give very gratifying results.

## CYTOTOXIC DRUGS:

Falkson and Sculz in 1962 observed that solar keratosis disappeared in patients

receiving 5-Fluorouracil systemically for advanced carcinomatosis. This led to the development of a 5-F.U. cream for topical application. We have now been using this cream selectively for 5 years and like Chiaffitelli and many others have found it to be most effective in the treatment of solar keratosis especially when there are multiple lesions; we have also found it useful for dealing with multiple superficial basal and squamous cell carcinomas, curing at least 50% of them.

Bolisario claims a 92% overall cure rate for basal cell carcinomas using a mixture of Colcemid, triiodolciran and methotrexate in ointment form. He also claims to obtain excellent cosmetic results. We still prefer to use conventional methods (surgery or radiotherapy) for the solitary infiltrating lesions and only use 5-Fluorouracil cream for superficial but extensive ulcers and for the superficial multiple ones. The method of application of the cream is most important. The patient must be instructed to apply it over and around the lesion twice daily; he must wipe off the surface ointment and the debris from the lesion with a clean piece of gauze prior to each application. Any crust which is present must be removed from the surface of the ulcer at frequent intervals so as to allow the cytotoxic cream to come into close contact with the malignant cells. Unless these instructions are followed religiously it is unlikely that healing will occur. The average time needed for complete destruction of the carcinoma is three to four weeks. A dry, or occasionally a moist erythema, similar to that obtained during radiotherapy, occurs; if severe, this is easily controlled by the application of a steroid ointment.

#### CONCLUSION:

Although skin cancer notifications are bound to be erratic and incomplete, it can be stated that its incidence amongst the white races increases as the geographical location moves to a lower latitude. In Malta skin cancer is commonly found in the fairer skinned, mostly outdoor labour-

ers such as farmers, fishermen and stone miners. Basal cell carcinomas in Malta, as in most other countries, are much commoner than squamous cell cancers; this is more evident in females. Treatment methods include prevention, surgery, radiotherapy and in selected cases, cytotoxic topical application.

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