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VAN DIE REDAKSIE : EDITORIAL

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In 'n belangrike en interessante artikel wat onlangs in die *Suid-Afrikaanse Kankerbulletin*[1] verskyn het, word die logiese gronde van endokrienbehandeling vir borskanker beskryf. In hierdie artikel word die historiese agtergrond en die redes oorweeg vir hormonebehandeling (wat chemies of chirurgies beskikbaar gestel word) by die palliatiewe behandeling van verspreide borskarsinoom.

Kanker van die bors is die hoofoorsaak van sterfte by vrouens tussen die ouderdomme van 40 en 60 jaar; en op die huidige tydstip sal ongeveer 70% van alle pasiënte wat dié toestand het, palliatiewe behandeling op die een of ander stadium van hul siekte nodig hê.

Huggins het die beginsels wat aan die grond lê van die gebruik van hormonebehandeling om endogene hormone te onderdruk of te neutraliseer, soos volg opgesom (òf dit nou ook al medies toegedien word òf deur die verwydering van endokrienkliere bereik word): In die eerste plaas is daar die feit dat kanker nie noodwendig outonoom en selfbestendigend is nie en, tweedens, kan kanker aan die gang gehou en aangemoedig word deur endokriene wat op die normale en selfs ondernormale vlakke funksioneer.

Die noue verband tussen die groei van die gewas en die hormonebalans van die liggaam, het gelei tot die hipotese dat 'n endogene abnormaliteit van die metabolisme van steroïdes verantwoordelik mag wees om die groei van die gewas te laat begin en dit in stand te hou.

Die indikasies vir die beheer van borskanker deur die gebruik van hormone is soos volg: (*a*) gevorderde primêre letsels wat nie op die konvensionele maniere beheer kan word nie, (*b*) as 'n bykomstige metode van behandeling, veral wanneer daar wye verspreiding is, en (*c*) as sekondêre behandeling van kanker wat alreeds behandel is, of waar daar uitsaaiings is.

Ooforektomie is al toegepas, maar daar bestaan geen praktiese manier waarop pasiënte vir dié soort behandeling uitgesoek kan word nie. Bilaterale adrenalektomie is in sommige gevalle toegepas aangesien dit gevind is dat die byniere steroïdes kan afskei wat groei aanmoedig en wat sekere neoplastiese groeisels aan die gang hou. Hipofisektomie is ook al uitgevoer, en aangesien remissies waargeneem is by vrouens met borskanker met uitsaaiings, wat voorheen al ooforektomie en adrenalektomie ondergaan het, wil dit voorkom of sommige soorte borskanker afhanklik is van die hipofise-hormone om te groei. Hipofisektomie bring ook onderdrukking van die ovaria en die byniere teweeg waar hierdie organe nie verwyder is nie.

Dit is nie bekend hoe estrogene remissies teweegbring by vrouens met borskanker nie. Daar mag onderdrukking van hipofise-funksie wees of ook 'n direkte uitwerking op die tumor. Dat estrogene die spoed waarmee die gewas groei, kan versnel, is welbekend. Dit is moontlik dat estrogene 'n dubbele uitwerking kan hê — dat hulle die groei van tumore kan stimuleer of onderdruk, en dat enigeen van hierdie funksies oorheersend mag wees. Die toediening van progesteroon het geblyk teleurstellend te wees, alhoewel hierdie steroïed die gonadotropien en kortikotropien van die hipofise kan inhibeer en 'n direkte uitwerking op die bors kan hê wat die uitwerking van estrogeen belemmer. Androgene kan ook remissies teweegbring by pasiënte met borskanker, maar die meganisme is nie bekend nie. By sommige pasiënte kan androgene die groei van die tumor verhaas, moontlik omdat dit omgesit word in estrogeen. Dit mag ook wees dat androgene in groot dosisse hipofise-funksie onderdruk, soos dit die geval is met estrogene. Omrede van hul anaboliese uitwerking kan androgene ook veroorsaak dat pasiënte gewig optel, sterker voel, en 'n gevoel van algemene welstand kry. Hierdie uitwerking moet egter nie as bewys van regressie van die kanker aanvaar word nie.

Kortisoon, hidrokortisoon, en hul verwante vorme is ook met 'n sekere mate van sukses gebruik. Om die hele probleem van die hormone-behandeling van borskanker egter in perspektief te sien, behoort die oorspronklike artikel gelees te word. Dit bevat onder andere 'n groot aantal verwysings na die basiese werk wat al gedoen is op die gebied van hierdie moeilike en belangrike probleem.

1. Dworin, M. (1961): S. Afr. Kankerbull., 5, 192.

BREAST CANCER

The rationale of endocrine therapy in breast cancer is the subject of an article published recently in the *South African Cancer Bulletin*.[1] In this paper an outline is given of the historical development and the indications for hormonal therapy, achieved by chemical or surgical methods, in the palliative treatment of disseminated carcinoma of the breast.

Cancer of the breast is the leading cause of death in women of forty to sixty years of age, and at the present time about 70 per cent of afflicted subjects will need palliative therapy at some period in the course of their disease.

The therapeutic use of ablation of endocrine organs by surgery or by medication, to suppress or neutralize endogenous hormones, is based on certain principles, as stated by Huggins: firstly, that cancer is not necessarily autonomous and intrinsically self-perpetuating; and secondly, that cancer can be sustained and propagated by

endocrines that are functioning at normal or even subnormal levels. The close relationship between tumour growth and hormonal balance has led to the hypothesis that an endogenous abnormality of steroid hormone metabolism may be responsible for initiating and/or maintaining growth of the tumour. The indications for hormonal control of breast cancer are: (*a*) for advanced primary lesions beyond conventional methods of therapy; (*b*) as an adjunct to other methods, especially when the disease is widespread; and (*c*) as a secondary procedure for treated, but recurrent or metastatic, cancer.

Oophorectomy has been practised, but no practical means of selecting patients has been found. Bilateral adrenalectomy has been carried out in some cases, since it has been found that the adrenal glands can secrete growth-promoting steroids that will maintain dependent neoplasms. Hypophysectomy has also been performed, and since objective remissions have been observed in women with metastatic breast cancer, who had previously undergone oophorectomy and adrenalectomy, it would appear that some breast cancers may be dependent on pituitary hormones for growth. Hypophysectomy also induces suppression of the ovaries and the adrenal glands where these have not been removed.

It is not known how oestrogens induce remissions in women with breast cancer; there may be suppression of pituitary function or a direct action on the tumour. It is well established that oestrogens can accelerate the growth of the tumour. It is possible that oestrogens may have dual effects, one to stimulate and one to suppress, of which either action may predominate. Progesterone administration has proved disappointing, although this steroid may also inhibit the pituitary gonadotrophin and corticotrophin and can act directly on the breast to interfere with the action of oestrogen.

Androgens may induce remissions in patients with breast cancer; the mechanism is unknown. Androgens may accelerate the growth of the tumour in some patients, possibly because of conversion into oestrogenic hormone. As with oestrogens it may be that androgens, in big doses, depress pituitary function. Because of their anabolic effects androgens may cause patients to gain weight, feel stronger, and show other improvement, which, however, must not be interpreted as evidence of regression of the tumour. Cortisone, hydrocortisone, and their analogues have also been used with some success. The original article on which this annotation is based should be read for fuller details. Many references are given to the fundamental work that has been carried out in this grave and difficult problem.[1]

1. Dworin, M. (1961): S. Afr. Cancer Bull., **5**, 192.

THE BENEVOLENT FUND

It was with the greatest pleasure that we acknowledged, in the *Journal* of 17 February, a record number of donations, for any one month, to the Benevolent Fund of the Medical Association. During January, more than 300 members sent donations, ranging from R100 to less than one rand, with their subscriptions for 1962. Together with the usual monthly donations in the form of 'votive cards' and 'for services rendered', the total received during January was R1,377.51.

This was a most encouraging response to the appeal attached to subscription accounts by the Chairman of the Management Committee of the Benevolent Fund. Members obviously realize the importance of the work of the Fund, which is in great need of money to continue its beneficence among the dependents of our less fortunate colleagues. All donations, however small, help materially to increase the amount available for distribution among those requiring assistance.

We hope that all members with outstanding accounts will follow the example of those who so generously added a sum to their subscriptions in January. If every member donated even one or two rands in this way, the Fund would benefit by many thousands of rands a year. Many branches undertake some special fund-raising effort each year, but the sums collected, large though they may be, are not enough for the Fund to fulfil its obligations as the Management Committee would wish. A sustained increase in individual donations would go far towards achieving this end.