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WAT ENDOKRINOLOGIE NIE IS NIE DIE NIEMANDSLAND VAN GENEESKUNDE

Albright¹ het in sy welbekende inleiding tot die afdeling oor Endokrinologie in Cecil se handboek oor geneeskunde, oor hierdie tema geskryf. Endokrinologie het pas onlangs in 'n agtenswaardige tak van geneeskunde ontwikkel—vry van die towery en kwaksalwery van orgaanterapie, verjonging, en dies meer. Nog steeds word die twee mees algemene groepe siektes van die buislose kliere, suiker-siekte en skildklierwerkingsstoornisse, van endokrinologie geskei en word hul in spesiale klinieke, anders as endokrinologies, gesien. Aan die anderkant vind enige toestand wat nie vanselfsprekend by 'n besonder stelsel inpas nie en wat se etiologie onduidelik is, enige rommel van die geneeskunde, wat nie die hart van 'n besondere spesialis verlustig nie, sy pad na die endokrinoloog. Hoofstukke oor gans onverwante onderwerpe word selfs in handboeke oor endokrinologie gevind; bv., 'Obesity' en 'Congenital anomalies sometimes mistaken for endocrinopathies' in Wilkins se boek oor kinderendokrinologie² en hoofstukke oor *polyostotic fibrous dysplasia* en *Paget's disease* in Albright se boek oor die byskildkliere.³

Vetsug staan bo aan die lys van indringers op die gebied van die kliere. Oortollige vet is nooit aan stoornisse in die werking van buislose kliere te wyte nie met die enkel uitsondering van Cushing se sindroom wanneer proteïenweefsel werklik in vet omskep word. In elk geval is vetheid nie die uitstaande kenmerk van hierdie toestand nie. Dit kan met nadruk beklemtoon word dat oortollige vet nooit aan gebrekkige skildklierwerking of aan enige ongesteldheid van die harsingslymklier te wyte is nie.

Vet is aan kos en aan niks anders te danke nie. Dit is nie nodig om 'n vraat te wees (alhoewel dit dikwels die geval is) om vet te wees—daar moet net meer geëet word as wat nodig is. As 2,500 kalorieë per dag nodig is en gemiddeld 2,590 kalorieë per dag gebruik word is die resultaat 10 gram vet. Hierdie oortollige kos kan nie spoorloos verdwyn nie (aangesien die mens aan die wette van stofbewing onderworpe is) en die liggaam beskik nie oor enige meganisme wat dit kan verwerp nie. Hierdie ekstra 90 kalorieë beteken 1 kilogram, of meer as 2 pond, oortollige vleis per 100 dae, 7 pond per jaar, 50 ekstra pond elke sewe jaar. (Weliswaar is hierdie rekenkunde ietwat te vereenvoudig, maar die beginsel is akkuraat). Wat hierdeur te kenne gegee word is dat vetsug nie aan klierwerking te wyte is nie.

EDITORIAL

WHAT ENDOCRINOLOGY IS NOT THE NO-MAN'S LAND OF MEDICINE

Albright,¹ in his well-known introduction to the section of Endocrinology in Cecil's Textbook of Medicine, has written on this theme. It is only within recent years that endocrinology has become a respectable branch of medicine, freed from the witchcraft and mumbo-jumbo of organotherapy, rejuvenation and the like. Even now the two commonest groups of diseases of the ductless glands, diabetes and dysthyroidism, are usually divorced from endocrinology and seen in special clinics other than the endocrine clinic. On the other hand any condition not obviously affecting a particular system, whose aetiology is poorly understood, any rag-tag or bobtail in medicine which brings delight to the heart of no particular specialist, finds its way to the endocrinologist. Even text-books of Endocrinology include chapters on totally non-endocrinal subjects; for example, 'Obesity' and 'Congenital anomalies sometimes mistaken for endocrinopathies', in Wilkins' book on paediatric endocrinology,² and Albright's book on the parathyroids,³ which contain chapters on polyostotic fibrous dysplasia and on Paget's disease.

The commonest invader of the glandular province is obesity. The deposition of excess fat is never caused by endocrine dysfunction, with the one and only exception of Cushing's syndrome, in which proteinous tissue is actually transformed into fat. Obesity in this condition is in any case not the outstanding feature. It may be particularly stressed that obesity is not produced by subthyroidism nor by any known pituitary disorder. Fat comes from food and from nothing else. One does not have to be gluttonous to get fat (though one often is) but one does have to eat more than is necessary. Let us consider it; if one's requirement is 2,500 calories per day, and one averages 2,590 calories, this is the equivalent of 10 grams of extra fat. This superfluous food cannot disappear (since man is subject to the laws of conservation of matter), nor does the body possess a mechanism for 'burning it away'. This extra 90 calories, then, mounts up to 1 kilogram, or over 2 pounds, of surplus flesh within 100 days,

Af en toe kan vetsug toegeskryf word aan 'n oormatige aptyt, wat patologies is eerder as sielkundig of as gevolg van omgewingsfaktore. So 'n aptyt kan die gevolg wees van oormatige insulien van 'n alvlieseilandjiegewas, van behandeling met bynierskors-steroïede (en in Cushing se sindroom) en van siekte (bv. gewas, harsingontsteking) wat regstreeks die aptytsentrum van die hipotalamus affekteer. Laasgenoemde is interessant maar is besonder seldsaam en dit mag met uitermatige slaperigheid en poliurie gepaard gaan. Hipogonadisme mag voorkom as die siekte so ver gevorder het dat dit ook die voor-hipofeseklier aangetas het. Dit, dan is Fröhlich se sindroom, dit is buitengewoon seldsaam; kom feitlik nooit voor nie. Hier gaan die vetsug gepaard met 'n endokrienongesteldheid, maar word nie daardeur veroorsaak nie. Vet seuns is nie voorbeelde van Fröhlich se sindroom nie, hulle ly nie aan gebrekkige geslagskliere nie (die roede is grotendeels deur vet omsingel maar is in werklikheid redelik groot) en daar is geen bevredigende bewyse dat puberteit vertraag is nie. Hulle is vet. Hulle eet te veel.

Een ander endokrienstoornis wat dikwels met vetsug geassosieer word, alhoewel die verband nie duidelik is nie, is *hyperthecosis ovarii* (Stein-Leventhal sindroom). Muller⁴ beskou dit as die mees algemene oorsaak van sekondêre amenorrhoea. Seer seker verloor hierdie pasiënte nie outomaties gewig nie wanneer die menstruasie-toornisse deur 'n wigreseksie van die eierstokke uitgeskakel word nie, hul moet net so getrou hul dieet volg soos enige ander vet persoon.

Net so is die teenoorgestelde toestand, die sielkundige verlies van aptyt, *anorexia nervosa*, nie werklik endokrien nie alhoewel dit, in 'n ernstige geval, sekondêre hipofesetekens, mag toon. Gewigsverlies is 'n endokriensimptoom by skildkliervergiftiging en by geen ander siektetoestand nie.

Die volgende nie-endokrien-toestand is die van gewone harigheid. Harige vroumense is ongelukkig algemeen en tensy hul harigheid slegs deel van 'n kompleks is, soos by die adrenogenital sindroom, is daar niks wat die endokrinoloog op sy spesiale gebied kan doen om te help nie. Die teenoorgestelde toestand, gedeeltelike of totale *alopecia*, staan in geen verband met die buislose kliere nie—die algemene ylwoording van hare by gebrekkige skildklierwerking of die uitval van hare by die slape met manlikheidswoording is iets heeltemal anders.

Ook saamgevatte erflike beensiektes dring ongeoorloof die gebied van endokrinologie binne o.a. *osteogenesis imperfecta*, *polyostotic fibrous dysplasia*, *Marfan se sindroom*. Ander vername erflike siektes sluit in mongolisme en seldsame rariteite soos die Lawrence-Moon-Bidet-Biedl sindroom, Werner se sindroom en die abnormale ektodermiese weefselontwikkeling.

Die finale groep onder bespreking is die van die sielkundige geslagsafwykings. Homoseksualiteit is 'n geestes- nie 'n endokrienambivalensie nie. Dieselfde geld vir transvestisme. Gevalle soos bv. die van 'Christine Jorgensen' het in die jongste tyd baie publisiteit ontvang. Dit is die moeite werd om te beklemtoon dat hierdie mense anatomies geheel en al normaal eenslagtig is (gewoonlik manlik) wat 'voel' dat hul eintlik aan die teenoorgestelde geslag behoort. Of hierdie mense

7 pounds a year, 50 extra pounds in 7 years. (Admittedly the arithmetic is slightly over-simplified, but the principle is correct.) What we are aiming at in all this is to show that obesity is not glandular.

Occasionally obesity may be conditioned by an excessive appetite of a pathological nature (rather than one of habit or of psychological or environmental nature). Such an appetite may occur from the excessive insulin of a pancreatic-islet tumour, from treatment with adrenal cortical steroids (and in Cushing's syndrome), and from disease (e.g. tumour, encephalitis) directly affecting the appetite centre of the hypothalamus. The last-mentioned is interesting but extremely rare, and may be combined with excessive drowsiness and polyuria. Hypogonadism may occur, but only when the disease progresses to affect the anterior pituitary gland as well. This, then, is Fröhlich's syndrome: it is excessively rare—virtually non-existent. The obesity here is combined with an endocrine disorder, but is not caused by it. The fat boys we see are not examples of Fröhlich's syndrome, they are not hypogonadal (the penis is largely embedded in fat, but really of fair size), and there is no good evidence that their puberty is delayed. They are fat. They overeat.

One other endocrine disturbance is frequently associated with obesity, although the relationship is obscure. This is hyperthecosis ovarii (Stein-Leventhal syndrome), which Muller⁴ claims to be the commonest cause of secondary amenorrhoea. Certainly these patients do not automatically lose weight when the menstrual disturbance is corrected by wedge resection of the ovaries, but need to diet as strictly as any other obese person.

The opposite condition, that of psychological loss of appetite, *anorexia nervosa*, is likewise not really endocrine although it may, when of gross degree, produce secondary hypopituitary features. Loss of weight is an endocrine symptom in thyrotoxicosis and in nothing else.

The next non-endocrine state is that of simple hirsutism. Hairy women are, unfortunately, common, and, unless their hairiness is merely part of a complex, as in the adrenogenital syndrome, there is nothing the endocrinologist can do to help from his special point of view. The opposite state, patchy or total alopecia, has no endocrine connexions at all—the general thinning of the hair in hypothyroidism or the temporal recession of the hair in masculinization are quite different.

The generalized congenital bone-disorders also spuriously invade the endocrine domain. *Osteogenesis imperfecta*, *polyostotic fibrous dysplasia*, *Marfan's syndrome*, and so on, appear. Other major congenital disorders include mongolism and occasional rarities such as the Lawrence-Moon-Bidet-Biedl syndrome, Werner's syndrome and the ectodermal dysplasias.

The final group for discussion is that of the psychological sexual aberrations. Homosexuality is a mental ambivalence, not an endocrine one; transvestism the same. Transvestites, such as 'Christine Jorgensen', have been recently much in the news. It is worth emphasizing that these people are, anatomically, perfectly normally unisexual (usually male), who 'feel' that they really should have been born into the other sex. Whether

chirurgiese geslagsverandering behoort te ondergaan is nie 'n probleem vir die endokrinoloog nie.

1. Albright, F., In Cecil, R. L. en Loeb, R. F. (1955): *Textbook of Medicine*, 9de ed. Philadelphia en Londen: W. B. Saunders & Company.
2. Wilkins, L. (1950): *The Diagnosis and Treatment of Endocrinal Disorders in Childhood and Adolescence*. Springfield, Ill.: C. C. Thomas.
3. Albright, F. en Reifstein, E. C. (1948): *The Parathyroid Glands and Metabolic Bone Disease*. Baltimore: Williams and Wilkins Co.
4. Muller, W. H. (1956): In Symposium oor Endokrien ongesteldhede II, Vergadering van die Tak W.P. van die Med. Ver. van S. Afr. 27 April. Kaapstad.

they ever merit an operative 'change of sex' is not a problem for the endocrinologist.

1. Albright, F., In Cecil, R. L. and Loeb, R. F. (1955): *Textbook of Medicine*, 9th ed. Philadelphia and London: W. B. Saunders & Company.
2. Wilkins, L. (1950): *The Diagnosis and Treatment of Endocrinal Disorders in Childhood and Adolescence*. Springfield, Ill.: C. C. Thomas.
3. Albright, F. and Reifstein, E. C. (1948): *The Parathyroid Glands and Metabolic Bone Disease*. Baltimore: Williams and Wilkins Co.
4. Muller, W. H. (1956): In Symposium on Endocrine Disorders II, Meeting of Western Province Branch of Med. Assoc. of S. Afr., 27 April, Cape Town.