DIABETES IN THE CAPE PENINSULA

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Importance

Today we have a fair knowledge of the prevalence of diabetes in Caucasian peoples. The famous survey at Oxford, Massachusetts,[1] uncovered 40 known diabetics, in 70% of a total population of 5,000, and 30 previously unknown diabetics, giving a total prevalence of 1·7%. A number of 'suspicious' subjects were also discovered, and on later follow-up examinations 25 remained 'suspicious'; 17 of these 25 had become diabetic four years later.

From this and later surveys we believe that, at any rate in Europe and America, about 1% of the total population are known diabetics, 1% are undiagnosed diabetics, and at least another 1% are predictable diabetics (or, if you like, 'diagnosable prediabetics'). More still would be 'suspected but undiagnosable prediabetics'. On this basis we may presume that there are about 60,000 actual diabetics among the European population of South Africa who do not even suspect the presence of this disease. The prevalence of diabetes in the Cape Coloured population is not likely to be lower, and may be higher, as suggested by some very rough figures from our own diabetes clinics. Some 4,000 different patients attended our clinics during the past 2 years, with a European to Coloured to Bantu ratio of almost exactly 6 : 12 : 1. The 1951 census figures for the general population of the Cape Peninsula and vicinity gives figures of roughly 5 : 4 : 1. The apparently high prevalence of diabetes among Coloured people is evident. These rough figures also suggest, rather surprisingly, that the proportion of affected Bantu in the Cape is almost as high as that of Europeans, but there are many fallacies in this.

The only other estimate of the occurrence of diabetes among the Bantu in Cape Town was provided by Sanders[2] (1960), who found that 0·22% of approximately 20,000 people resident in Langa Township were known diabetics who attended the local Native Hospital at some time during a 15-month period. The *true* prevalence of diabetics among the Langa Bantu must have been considerably greater than this.

So far we have no figures regarding the frequency of diabetes in the Indian or in the Malay population in the Cape. Plainly, this is a matter of great importance, and its proper investigation awaits financial backing.

Today, by far the most important clinical aspect of diabetes is the vascular component. The cardiovascular-renal disease of diabetes has moved up to 5th or 6th place in American mortality statistics while American ophthalmologists find that the number of patients presenting with complications of diabetes exceed that of any other disease. Among the rural races we have long believed that diabetic vascular disease did not exist, but this is certainly incorrect. The incidence of angiopathy in diabetes depends on a number of factors, which include the diligence of the seeker and the duration of the diabetes. Maybe the type of diet also plays a part here, and this would be related to the degree of urbanization of primitive populations.

There appears to be little difference between our Coloured and European diabetics, either in type of diabetes,

in response to oral drugs, or in vascular complications. We do not see very many Bantu diabetics, but their disease does not appear to differ from that of Europeans. About the only way in which diabetes in our clinic differs basically from that in Britain, is in the relatively large proportion caused by chronic pancreatitis, which I estimate to be present in roughly 3% of our clinic patients. Most, but not all, of this is related to high alcohol consumption.

Oral Drugs

Working in the diabetes clinic today is exciting. Our methods of management of diabetes have been changing, and the oral drugs have brought with them implications far beyond their simple use in treating mild diabetics. A snap survey in our clinic in 1960 indicated that insulin was being used in only 29% of all cases (including the juveniles), a sulphonylurea in over 50%, and diet alone in 14%. I have no doubt that the population on 'diet alone' should be larger, but who would care to predict the relative proportions in 10 years time?

In general, the Coloured and European diabetics respond similarly to oral drugs. Careful analysis, however, both in 1957 and 1962, has revealed a poorer initial response to tolbutamide among Coloured patients on the whole. This may simply be a reflection of the greater difficulties encountered by Coloured people in maintaining correct dietary regimens.

Diet for the Bantu

Our ordinary instructions and diet sheets for diabetics are based on European eating habits. For the majority of Bantu diabetics this is quite unsuitable, on account of both cost and taste. The normal Bantu diet consists very largely of carbohydrate, with maize as the staple foodstuff. Frequently the most one can attempt to achieve for the Bantu patient is:

1. The abolition of sugar, to which the Bantu are very partial, and its substitution by saccharin.
2. The abolition of the cola drinks.
3. The restriction of bread to a definite number of slices per day.
4. The division of the daily portions of bread, maize-products and fat into 3 main meals, eaten regularly, and such between-meal snacks as may be necessary in insulin-taking diabetics.

Patients are also persuaded to eat fish whenever possible, since this is cheaper than meat, and to take some milk daily and fresh fruit or vegetables at least once a day.

What we call our 'economical diet scheme', designed primarily for the Bantu, at 2 calorie levels, has been printed in detail in English, Afrikaans and Xhosa. The English version has already appeared in this *Journal*,[3] and the Xhosa translation follows here.

Conclusion

I should like again to emphasize the importance of diabetes from a purely numerical point of view. Present evidence indicates that about 10% of the total White population are potential diabetics; among the Bantu it is probable that the figure is similar, but so far has been kept down by environmental conditions. Perhaps 40% of Natal Indians are potential diabetics. There are certainly over a million potential diabetics in this country. In the Cape, we do not know where the Indian and the Moslem (Malay) population fit in. Surely this whole subject is of sufficient public health importance to justify the spending of a little money on its full investigation?

Thanks are due to Miss G. E. M. Kotze, Miss J. Dreosti, Mr. P. Oosthuizen and Miss E. Sophangisa for their assistance in the preparation of the dietary instructions in Xhosa, and to Dr. J. G. Burger, Medical Superintendent, Groote Schuur Hospital, for permission to reproduce them.

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1. Wilkerson, H. L. C. and Krall, L. P. (1953). J. Amer. Med. Assoc., **152**, 1,322.
2. Sanders, S. (1960): S. Afr. Med. J., **34**, 248.
3. Dreosti, J. M. (1963): *Ibid.*, **37**, 808.

GROOTE SCHUUR HOSPITAL

UKUTYA OKULULA OKUNGENANDLEKO KUMNTU ONESIFO SESWEKILE

Umntu onesifo seswekile akanako ukutya iswekile nokutya okusisitatshi njengomntu ophilileyo. Ukuba wena uthe watya kakhulu ezizinto, igazi lakho lifumba iswekile ethi ibe yingozi ukuba ayithanga inyangwe. Izigulane zesisifo, ezizingisa ngonyango lwazo maziyilumkele lengozi empilweni yazo. Ezinye izigulane zigcinakala empilweni ngokunonophela umyalelo kagqira wokutya qha, kanti abanye bafuna namayeza nesitofu.

KUBALULEKILE MPELA ukuba ungatyi okanye usele izinto ezithe zagalelwa iswekile. Endaweni yeswekile sebenzisa iipilisi ezenza mnandi ngokweswekile ezibizwa ngeligama — iSACCHARIN — esithi sikunike eklinikini. Ukutya okunesitatshi kufuneka kuthathwe kancinane. Ukuba ulityeba wothi usinde kwesisifo ngokuthi unciphise ukutyeba oko.

KHUMBUA:

1. *Iziselo ezibandayo* (cool drinks) azivumelekile kuba zineswekile.
2. *Ikondanisi* ineswekile, mayingasetyenziswa. Ukuba awunadlela yokufumana amasi okanye ubisi, sebenzisa olu lungumgubo ubisi. Dubela intwana yalomgubo ekomityini ngamanzana abandayo ukuze lomgubo ube yintlama ethambileyo. Zalisa ikomityi leyo ngamanzi ashushu. Ubisi olwenziwa ngoluhlobo lungasetyenziswa neti nekofu kwakhona lungadityaniswa nesidudu xa kulungiswa ukutya.
3. Ubukhulu becwecwe lesonka esimhlophe okanye esimdaka, okanye esitshisiweyo malilingane kulo mlinganiso.

Isonka esilungileyo nesingenandleko sesimdaka.

4. *Imajarini* ayinandleko yaye ayinamahluko kwibotolo.
5. Ukuba umka ekhaya kuse kusasa, qaphela into yokuba uhambe usityile isidudu.
6. Okulungileyo kukuba ufumane isuntswana lenyama nokuba lentlanzi yonke imihla kunokuba uyitye kakhulu kanye ngeveki.
7. Zama ukuba utye isuntswana lesiqhamo nokuba lelomfuno ongaphekwanga yonke imihla.
8. Umqombothi (unama 400 yamakalori), amarewu (anama 240 yama kalori). Kufuneka ubuze ugqira ngawo.

OKUKUTYA KULANDELAYO AKUVUMELEKANGA:

Iswekilni, igulokosi, ijamu, ubusi, inyobhanyobha, ilekese, itshokoleti, umgubo, ibanisi, ikeki, imiqhathane, ikasitadi, iayisi-kilimu, amafutha, ukutya okugcadiweyo, iziqhamo ezisezinkonxeni, ibiye, isitauti, iziselo ezibandayo (cool drnks), amasoseji.

YITYA KANGANCOKO:

Isophu ecwengileyo, inyobhanyobha eyenziwe ngenyama (oxo, bovril, njalo-njalo), iti, ikofu esiliweyo (hayi esezinkonxeni okanye ebotileni eseyilungele ukugalelwa ezikomityini), isoda-wotha, incindi ye lamuni, invinika, ityiwa, ipepile, imasitadi, ikilovisi, isinamoni, inatimege, ikheri, ikhapetshu, ikolifulawa, iseleri, ityutyumba, iimbotyi eziluhlaza, iletesi, usolontsi, isipinatshi, amakhowa, itswele, iphopho, ithanga, amaradeshi, irubbabha, usenza, itomata, amatenepu, amapikili angenaswekile.

Iziqhamo: Ungatya isiqhamo endaweni ye apile eliseluhlwini ngalendlela elandelayo:

ipere *eliphakathi* ngobukhulu, iapilikoso, inekiterini, ipesika, igirandila, imengo, ipilamu, ikwepile, okanye iorenji, *nokuba* ziigwava, ezimbini, icwecwe elikhanya ilanga lepayinapule, icwecwe elikhanya ilanga lespanspeki, ikomity ezeleyo yediliya, okanye icwecwe eliphakathi levatala, nokuba yibanana ephakathi.

Endaweni yecwecwe elinye lesonka, uvumelekile kwakhona ukuba utye ngokungagqithisiyo amatapile nokuba ngamabhatata, nokuba zierityisi, okanye amacephe amane ereyisi okanye umrayo womngqusho.

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XA KUFUNEKA UNCIPHISE UKUTYEBA, KUYIMPILO ENGENANDLEKO UKUBA UNONOPHELE LENDLELA YOKUTYA

UMLINGANISO WEMIHLA NGEMIHLA (ngama 1,000 yamakalori)

ISIDLO SAKUSASA:

Isidudu sombona — ikomityi ezeleyo sesivuthiweyo.
Ubisi (amasi, ubisi, okanye olungumgubo wobisi olongulwe ucambu lolona lulungileyo) — isiqingatha sekomityi esidudwni nasekofini.
Iziqhamo — iapile okanye nasiphna isiqhamo esikuluhlu.

ISIDLO SASEMINI:

Isonka esimdaka, esimhlophe okanye esitshisiweyo — icwecwe elinga — ngomlinganiso. Intlanzi, iqanda, okanye inyama ebhityileyo — ziphekwe nagamanzi Ubisi — ludityaniswe ekofini.
Ibotolo yamandongomane, imajarini, okanye amafutha ehagu — urwalazo nje.

ISIDLO SOKUHLWA:
Umngqusho okanye iimbotyi ezomileyo, okanye umgrayo womngqusho, nokuba zitapile — ikomityana ezeleyo (oku kunokudityaniswa nesityu).
Inyama, intlanzi, inyama esiliweyo, isibindi okanye nayiphina inyama ebhityileyo — isiqingatha sekomityi, iphekwe ngamanzi, okanye isityu *esinengwengwezi nje yamafutha*.
Imifuno — kangoko uthanda kuluhlu olunikiweyo.

NONOPHELA NGOKUNGAPHOSISIYO UMYALELO WOKUTYA KWAKHO, UGCINE AMAXESHA UGQIRA AKUFUNA NGAWO EKLINIKINI.

Ukuba utyebe kakhulu, kusenokufuneka utye ngaphantsi kwalomlinganiselo. Ugqira wokuxelela.

EZI ZILANDELAYO, KUNOKUFUNEKA UZITYE NGAPHANTSI KOMLINGANISELO

Isonka,
umbona
ungasebenzisi iswekile
ungaseli iziselo ezibandayo (cool drinks)
ungatyi kutya okugcadiweyo namafutha

XA UBUBUNZIMA OBUFANELEKILEYO, KUYIMPILO ENGENANDLEKO UKUSEBENZISA LOMLINGANISO WOKUTYA

UMLINGANISO WEMINI (1,600 yamakalori — Inyathelo le 6)

ISIDLO SAKUSASA:
Isidudu sombona — ikomityi ezeleyo sesivuthiweyo.
Ubisi — (amasi, ubisi, nokuba ngumgubo wobisi olongulwe ucambu lolona lulungileyo) — ikomityi uyidibanise esidudwini, nokuba nekofu.
Iziqhamo — iapile, okanye nasiphina isiqhamo esiseluhlwini.

ISIDLO SASEMINI:
Isonka (esimdaka, nokuba sesimhlophe, okanye esitshisiweyo) — amacwecwe amathathu alomlinganiso uwunikiweyo.
Intlanzi, okanye iqanda, nokuba yinyama ebhityileyo — isuntswana eliphekiweyo okanye elojiweyo. (Ungayitya intlanzi egcadiweyo kanye ngemini).
Ubisi — ikomityi ibenye.

ISIDLO SOKUHLWA:
Umngqusho okanye iimbotyi, nokuba zitapile (ezinye zezi zinokudityaniswa kwisityu) — ikomityi ezeleyo.
Inyama, intlanzi, ulusu, inyasma esiliweyo, isibindi, okanye nayiphina inyama engenamafutha — (isiqingatha sekomityi ephekiweyo nokuba idityaniswe nesityu).

IMIFUNO: Yitya kangangoko ufuna kuluhlu osewulunikiwe ngaphambili.

NONOPHELA NGOKUNGAPHOSISIYO U'MYALELO WOKUTYA KWAKHO, UGCINE AMAXESHA UGQIRA WAKHO AKUFUNA NGAWO EKLINIKINI.

QAPHELA: Ukuba usebenzisa isitofu se INSULIN, kufuneka ufumane ukutyana phakathi kwamaxesha okutya, phakathi kwesidlo sakusasa nesasemini, phakathi kwesidlo sasemini nesokuhlwa, naxa soulala. OKU KUBALULEKILE. Okukutya kwalamaxesha ungakucuntsula kuluhlu olu olunikiweyo, okanye ugqira angakuvumela wongeze kololuhlu ukutya kwalamexesha.