South African Medical Journal : Suid-Afrikaanse Tydskrif vir Geneeskunde

Cape Town, 20 October 1962 Volume 36 No. 42 Deel 36 Kaapstad, 20 Oktober 1962

EDITORIAL : VAN DIE REDAKSIE

THE BIRMINGHAM DIABETES SURVEY

In the past 15 years diabetes surveys have been carried out in several countries, e.g. in Massachusetts, Canada, East Germany, and Great Britain. They indicate that the known cases of diabetes amount to 0·5% of the population, or rather more, and among the people found on screen test to be glycosuric they uncovered previously unknown cases amounting to about the same percentage of the population. Another survey, the largest and fullest to date, has now been recorded by a working party, appointed by the College of General Practitioners and consisting of 10 practitioners in and around Birmingham, together with 7 members of the General Hospital and University, Birmingham. This survey confirms the earlier surveys in the proportion of previously known cases of diabetes and in the proportion of unknown cases discovered with the glucose-tolerance test (GTT) among the glycosurics. It has hitherto been assumed that these rates represented the total of those with abnormal glucose tolerance. In the Birmingham survey, however, the GT test was also applied to a control group consisting of selected members of the test population showing no glycosuria in the screen test, matched for age and sex with the newly discovered glycosurics and the known diabetics, and a substantial proportion of these controls showed abnormal glucose tolerance. Other interesting facts also emerge from this survey.

The population sample consisted of all the persons on the NHS lists of the 10 practitioners in the working party. For the screening, urine-test glucose-oxidase paper strips were used, which made it possible for the subjects to test their own urine. They were instructed to apply the test one hour after the chief meal of the day and to report the results. Reports were returned by 18,532 patients (95·5% of the original lists), who corresponded closely in age and sex distribution with the population of England and Wales. They included 119 known cases of diabetes and, besides these, 493, or 2·7%, reported glycosuria. Of these, 465 (94%) attended at the hospital for a standard 50 G. oral glucose-tolerance test.

Apart from the known cases, in 127, or 0·69% of the test population, an undoubted diabetic type of tolerance curve was shown, indicated by a 1-hour capillary blood-glucose figure exceeding 180 mg./100 ml. and a 2-hour figure exceeding 120 mg. In 55 of these (0·30% of the population) the fasting sugar exceeded 130 mg. (florid diabetes), of whom 32 presented diabetic symptoms (thirst, pruritus, loss of weight, or fatigue). There was diabetic retinopathy in 3, and in 6 clinical evidence of occlusive arterial disease in coronary, cerebral or femoral vessels. After about a year 4 had died and 2 were on insulin, 13 on oral treatment, and 36 on diet alone. The remaining 72 (0·39%) came into the category of GTT diabetes, with the fasting figure below 130 mg. Twelve of these were considered to have mild diabetic symptoms, and have been treated by diet alone, as have those also who were much overweight. The rest were advised to ignore this abnormality, but importance is attached to their follow-up. It is noteworthy that there was a significant excess of obese persons in these 72.

Thus the survey revealed in the test population a proportion of 0·64% of known cases of diabetes and 0·69% of discovered 'diabetic' abnormality.

A further 70 (0·38%) of the glycosuric cases showed abnormal GT curves of which the significance is unknown — including 16 cases where the fasting value exceeded 110 mg., but the 2-hour figure was below 120 mg.; 20 cases where the 1½-hour figure exceeded 160 mg. and the ½-hour or 1-hour figure or both exceeded 180 mg. while the fasting level was below 110 mg. and the 2-hour figure below 120 mg.; and 34 cases where the 2-hour figure exceeded 120 mg. while the fasting and 1-hour values were normal. These signs have been viewed with suspicion, but there is no definite evidence that their presence regularly leads to clinical diabetes. However, this group of 70 gave a first-degree family history of diabetes in 12·9% of cases and is thus linked with the group of 127 with undoubted diabetic abnormality, in which this family history was given in 13·4% of cases. These percentages are about one-half of those found in the 119 previously known diabetics in the survey and, outside the survey, the 700 newly diagnosed diabetics attending the hospital clinic in 1960; but are roughly double those found in the lag-storage, renal glycosuria and normal groups (see below) and in the control population.

Other groups discovered among the 465 cases with glycosuria were (*a*) 100 (0·54%) with lag-storage curves, indicated by a ½-hour or 1-hour level over 180 mg., with fasting levels under 110 mg. and 2-hour figures under 120 mg. (68 of them had a peak at ½ hour and 32 at 1 hour); and (*b*) 54 (0·29%) with renal glucosuria, in which the blood sugar did not rise above normal at any time and (except in 2 cases) there was no significant amount of glucose in the fasting urine. These two groups are not associated with diabetes. The members of these groups were younger than the diabetics and included far more men than women, and a family history of diabetes was no more frequent in them than in the control population.

The remainder of the 493 cases fell into the category of normal (108 cases — 0·58%), with no glycosuria shown by 'clinitest', although the enzyme test may have been positive, and all blood values normal; and 6 unclassifiable cases, probably due to technical errors.

That diabetes is a disorder of the elderly is brought out in this survey by the fact that it was found to be about 8 times as common over 50 as under. This was as true in those with a newly detected 'diabetic' abnormality as for the cases already known. For known diabetes the sex incidence was about equal under 50, and over 50 it was

commoner in women; but, for newly detected diabetic abnormality, the sex incidence was about equal over 50 in florid diabetes and there was a significant excess ($P<0.05$) in males in the GTT diabetes group.

Control group. Of the matched group selected from those who gave a negative result in the screening test, the first 123 were fully investigated for glucose tolerance. A 'diabetic' abnormality was detected in 12 (9·8%), of whom 11 were over 50 (18% of that age group). None had diabetic symptoms. A further 28 (22·8%) showed other GTT abnormalities (including lag-storage), of which 19 were over 50 (30% of that age group).

The value of the Birmingham survey from the point of view of epidemiological research into the prevalence of diabetes and possible incipient diabetes is quite obvious, but the writers of the report seriously doubt whether a case is made out for further intensive diabetes-detection drives. The proportion of abnormal responses to the standard tests is so high as to throw doubt on their validity in diagnosis. The evidence that deterioration of abnormal tolerance to true diabetes is the rule is not convincing, and it may obviously be to the serious disadvantage of the patient to disclose to him his condition of symptomless 'glucose-tolerance test diabetes'. On the other hand, the detection and treatment of a florid case is greatly to the patient's advantage. The report points out that in a diabetes-detection drive the field may be greatly narrowed by questioning alone, and emphasizes the value of a family history of diabetes, a history of obesity, or a woman's recollection of bearing an overweight child or more than 6 children; it also suggests the restriction of the search to people over 50 years old.

1. Working Party of College of General Practitioners (1962): Brit. Med. J., 1, 1497.

DIE UITBREIDING VAN REGISTRASIE EN DIE SKYNBARE TEKORT AAN GENEESHERE

Die probleem van die skynbare tekort aan geneeshere in Suid-Afrika is al by verskillende geleenthede in hierdie *Tydskrif* bespreek.[1,2] Dit het onlangs weer in 'n nuwe verband ter sprake gekom (deur die Federale Raad van die Mediese Vereniging, die Suid-Afrikaanse Geneeskundige en Tandheelkundige Raad, en lede van die mediese professie en die publiek) as gevolg van die versoek van die Minister van Gesondheid aan die Geneeskundige Raad om oorweging te skenk aan die uitbreiding van die omvang van registrasie van mediese praktisyns soos bepaal deur die bestaande wet.

Die volle besonderhede insake hierdie versoek en die aanbevelings wat deur die Mediese Vereniging en die Geneeskundige Raad in dié verband gemaak is, is onlangs uiteengesit in 'n verklarende memorandum wat opgestel is deur dr. P. D. Combrink, Medesekretaris van die Vereniging, en wat gepubliseer is in die *Tydskrif* van 29 September 1962.[3] Lede wat dit nog nie gelees het nie, word sterk aanbeveel om dit te doen.

Aangesien die volledige informasie oor die saak dus wel beskikbaar is, wil ons dit nie nou hier weer bespreek nie. Wat ons egter tog wel wil doen, is om die aandag by vernuwing te vestig op sekere positiewe aanbevelings wat van tyd tot tyd gemaak word ten opsigte van moontlike maniere waarop die probleem van die skynbare tekort aan geneeshere in die Republiek benader kan word — heeltemal afgesien van die oorweging of registrasie uitgebrei sal word of nie.

Baie kort gestel, kom die opvatting van die Mediese Vereniging, wat ook onderskryf is deur die Geneeskundige Raad, daarop neer dat die Vereniging bewus is van en ook verontrus is oor die bestaan van 'n relatiewe tekort aan geneeshere wat hoofsaaklik spruit uit sulke faktore soos 'n wanverhouding tussen spesialiste en algemene praktisyns, 'n geografiese wanverdeling van praktisyns, 'n wanverdeling tussen gesalarieerde mediese beamptes en private praktisyns, ens. Hierdie tekort is egter nie so ernstig dat dit gebruik behoort te word as 'n argument om geneeshere in te voer wat nie aan die bestaande vereistes vir registrasie voldoen nie. Die Vereniging sal egter nie die uitbreiding van die omvang van registrasie teenstaan nie, met die voorbehoud egter dat slegs geskikte en bevredigend-gekwalifiseerde geneeshere aanvaarbaar sal wees, en met die verdere voorbehoud dat die metode wat gebruik sal word om die registrasie uit te brei, nie tot nadeel sal strek van die belange van ons eie, praktiserende, mediese professie nie. Die aanbevelings van die Vereniging van hoe op hierdie gebied te werk gegaan moet word, word in besonderhede vervat in die verklarende memorandum waarna ons alreeds verwys het.

Die beperkte uitbreiding van registrasie met spesiale voorbehoude is dus een van die maniere waarop die probleem van die relatiewe tekort aan geneeshere benader kan word. Die ander positiewe maniere is opgesom deur prof. O. V. S. Kok[4] in sy afskeidsrede as President van die Tak Noord-Transvaal. Ons wil dié positiewe aanbevelings hier weer noem en kortliks daarop uitbrei:

1. *Spesialisasie.* Daar bestaan geen twyfel nie dat die toenemende tendens tot spesialisasie 'n faktor is wat die beskikbaarheid van praktisyns vir die land as 'n geheel nadelig beïnvloed. In sommige stedelike gebiede (soos Bloemfontein, byvoorbeeld) is die verhouding alreeds 1 : 1; met ander woorde, daar is een algemene praktisyn vir elke spesialis. Elke regdenkende mens kan sien dat dit só nie kan voortduur nie. Die hele kwessie van die register van spesialiste en moontlike register vir konsultante sal in heroorweging geneem moet word. Die saak is dringend.

2. *Wanverdeling van algemene praktisyns.* In 'n land waar daar vryheid van beweging en onderneming is, kan persone natuurlik nie aan bande gelê word oor hoe en waar hulle moet praktiseer nie. Nogtans staan ons hier voor 'n probleem wat wel aangedurf moet word. Onder die positiewe voorstelle wat al gemaak is om die toestand van wanverdeling van geneeshere te verlig, kan die volgende genoem word: die beskikbaarstelling van beurse aan mediese studente met die voorwaarde dat hulle 'n gespesifiseerde tyd lank in gebiede moet praktiseer waar daar 'n akute tekort aan praktisyns is. Ook moet groepspraktyke in die platteland aangemoedig word as gedeeltelike bevrediging van die vereistes vir spesialisasie, en algemene praktisyns moet aangemoedig word om nagraadse kwalifikasies te verwerf wat hulle in staat sal stel om op 'n bevredigende manier te praktiseer selfs op plekke wat ver weg is van die grotere sentrums af.

3. Wat die *tekort aan hospitaalpersoneel* betref, moet ons toesien dat die werksvoorwaardes in ons land, op akademiese sowel as geldelike gebied, verbeter word. Daar is te veel eersteklas geneeshere wat ons land verlaat het, nie om politieke redes nie, maar omdat hulle aanbiedinge in die buiteland kry wat soveel beter is as wat ons hier kan aanbied. As ons op hierdie manier voortgaan, sal ons bronne opdroog. Die probleem van hoe om nie net ons voltydse personeel te behou in voltydse akademiese, navorsings- en kliniese betrekkings nie, maar om ook andere van elders te trek, moet dringende voorrang geniet en op 'n nasionale vlak ondersoek word.

4. *Nuwe mediese skole.* Daar bestaan geen twyfel aan die feit nie dat ons baie meer geneeshere in Suid-Afrika *kan* oplei en *behoort* op te lei. 'n Groot aantal potensieel geskikte kandidate word jaarliks deur die bestaande mediese skole afgewys omdat gebrek aan opleidingsgeriewe dit noodsaaklik maak.

Kort na die vorige oorlog het ons bewys dat ons wel die aantal studente wat opgelei kan word, aansienlik kan vergroot. Dit kan weer gedoen word, met dié voorbehoud egter dat dit waarskynlik verstandiger sal wees om addisionele nuwe skole te stig as om die bestaande inrigtings te oorlaai.

Op Bloemfontein is die Nagraadse Skoolbeplanningskomitee alreeds jare lank besig met die nodige voorbereidingswerk vir die stigting van 'n nagraadse en/of voorgraadse skool. Die werk van dié Komitee het al ver gevorder en hulle het al verbasende sukses bereik. Bloemfontein (wat in elk geval die sentrum is van 'n hele landsgebied met groot potensiële ontwikkelingsmoontlikhede) sou dus die logiese volgende plek wees waar 'n mediese skool gestig kan word. Daar is egter ook ander sentrums wat met vrug in mediese opleidingsinrigtings sou kon ontwikkel.

Wat die probleem van die skynbare en relatiewe tekort aan geneeshere in Suid-Afrika betref, is daar dus verskillende maniere waarop dit benader kan word. Ons pleit daarvoor dat verdere ondersoeke en verbeeldingryke beplanning op hierdie gebied nie verder uitgestel moet word nie. Ons is dit aan die status van die professie hier en aan die toekomstige behoeftes van ons land as 'n geheel verskuldig om ook op hierdie gebied betyds te sorg dat ons nie deur 'n onoorkombare noodtoestand oorval word nie.

1. Van die Redaksie (1960): S.Afr. T. Geneesk., **34,** 315.
2. *Idem* (1961): *Ibid.*, **35,** 345.
3. Combrink, P. D. (1962): *Ibid.*, **36,** 823.
4. Kok, O.V.S. (1962): *Ibid.*, **36,** 373.