and report these studies; and Dr. J. G. Burger, Superintendent of Groote Schuur Hospital, for permission to publish. These studies were supported by grants from the South African Council for Scientific and Industrial Research and by U.S. Public Health Service grant HE-03316 from the National Heart Institute.

REFERENCES

DIABETICS INTER-RACIAL COMPARISONS, I*

W. P. U. JACKSON, M.A., M.D., F.R.C.P. AND JOAN M. HUSKISSON,§ B.Sc., H.Ec. (DIETETICS), Endocrine Research Group of the South African Council for Scientific and Industrial Research, Department of Medicine, Medical School, University of Cape Town

A study was undertaken at the Diabetes Clinic to ascertain the prevalence of certain characteristics in the 3 main ethnic groups in Cape Town, i.e. White, Coloured† and Bantu. The White group was sub-divided into Jews and non-Jews,** and Moslems were also split off from the Coloured group. There were 100 patients in each of the Jewish, Moslem and Bantu groups and 150 patients in the White group--55% of patients interviewed knew of a blood relation with diabetes. Other figures were: White 39%; Coloured 44%; Bantu 63%. A study was undertaken at the Diabetes Clinic to ascertain the prevalence of certain characteristics in the 3 main ethnic groups in Cape Town, i.e. White, Coloured† and Bantu. The White group was sub-divided into Jews and non-Jews,** and Moslems were also split off from the Coloured group. There were 100 patients in each of the Jewish, Moslem and Bantu groups and 150 patients in the White group--55% of patients interviewed knew of a blood relation with diabetes. Other figures were: White 39%; Coloured 44%; Bantu 63%.

GENERAL PROCEDURE

Information regarding the patient's diabetes, height and weight, obstetrical history, therapy and diet was collected on punch-cards and manually punched out at the relevant numbers following a numbered key. The accumulated data were calculated in percentages. The individuals were not questioned about the purity of their racial grouping; for instance those who adhered to a Moslem religion were simply classified 'Moslem'. Thus, although the Moslem group consisted largely of 'Cape Malays',† there is certainly a considerable admixture of 'Coloured'.

In order to correct certain of our figures to apply to whole populations at risk, the 1951 census figures for Cape Town municipality plus the Cape Peninsula have been used by courtesy of the Director of Census and Statistics.

RESULTS

Family History

Knowledge of diabetes in members of the family (up to third degree relatives) was more frequent in the Jewish group—55% of patients interviewed knew of a blood relation with diabetes. Other figures were: White 39%; Coloured 30%; Moslem 31%, while only 8% of the Bantu were aware of any family history.

Sex

As seen from Table I, women heavily outnumbered men in all ethnic groups. It is possible that the bias in this survey was in favour of including more female than male diabetics because: (1) men may tend to come less frequently to a clinic because of work commitments, and (2) attending men may have been less available for inter-

<table>
<thead>
<tr>
<th>TABLE I. SEX DISTRIBUTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Female</strong></td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Corrected female/male ratio</td>
</tr>
<tr>
<td>---------------------------</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>%</th>
<th>Number</th>
<th>%</th>
<th>%</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>104</td>
<td>69.3</td>
<td>46</td>
<td>30.7</td>
<td>2.0:1</td>
<td></td>
</tr>
<tr>
<td>Jewish</td>
<td>75</td>
<td>75</td>
<td>25</td>
<td>25</td>
<td>1:1</td>
<td></td>
</tr>
<tr>
<td>Coloured</td>
<td>128</td>
<td>82.6</td>
<td>27</td>
<td>17.4</td>
<td>1:1</td>
<td></td>
</tr>
<tr>
<td>Moslem</td>
<td>78</td>
<td>78</td>
<td>22</td>
<td>22</td>
<td>1:1</td>
<td></td>
</tr>
<tr>
<td>Bantu</td>
<td>63</td>
<td>63</td>
<td>37</td>
<td>37</td>
<td>1:1</td>
<td></td>
</tr>
<tr>
<td>All races</td>
<td>448</td>
<td>74</td>
<td>157</td>
<td>26</td>
<td>1:1</td>
<td></td>
</tr>
</tbody>
</table>

*Corrected for sex distribution of the general population at risk. Note the female preponderance in all groups (see text).
view than women for the same reason. The importance of this bias is thought not to be great.

From census figures giving the sex distributions of different ages in the 3 different ethnic groups (White, Coloured and Bantu), we were able to correct the ratio of female to male diabetics to apply to the whole population of the Cape. (Correction could not be made for Jews and Moslems.) It appears that White (non-Jew) women diabetics outnumber men by 2 to 1, but in all other 4 groups the ratio is close to 4 to 1.

Age in 1963

The age distribution of patients attending the clinic differed considerably in the various racial groups. Over 50% of the White people (including Jews) were more than 60 years old, whereas in the other 3 groups the majority of patients were between 45 and 60, and these groups contained fewer patients older than 60. These differences largely correspond to the age structure of the general population in the different ethnic groups (see below).

Age at Diagnosis‡

The age distribution of the population of Cape Town differs considerably in the different races (Table II, Fig. 1). For this reason no real comparison of the age at diagnosis in the different race groups could be obtained by simply comparing the percentages in each group attending the clinic. The census figures give us the percentage of each race in each age group for White people (including Jews), Coloured (including Moslem) and Bantu. From these figures the expected age distribution at diagnosis of each group could be calculated by using the distribution in the White group as standard. By comparing the expected age distribution at diagnosis with that actually found, the trend in the development of diabetes in each decade in the different groups could be obtained (Table II, Figs. 2 and 3).

<table>
<thead>
<tr>
<th>Age group</th>
<th>Whites</th>
<th>Coloured</th>
<th>Bantu</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% Gen.</td>
<td>% Gen.</td>
<td>% Gen.</td>
</tr>
<tr>
<td></td>
<td>pop. in each age group</td>
<td>pop. in each group</td>
<td>pop.</td>
</tr>
<tr>
<td>10-19</td>
<td>15-9</td>
<td>23-5</td>
<td>9-2</td>
</tr>
<tr>
<td>20-29</td>
<td>16-6</td>
<td>19-9</td>
<td>30-5</td>
</tr>
<tr>
<td>30-39</td>
<td>14-9</td>
<td>11-7</td>
<td>25-4</td>
</tr>
<tr>
<td>40-49</td>
<td>13-7</td>
<td>8-84</td>
<td>11-9</td>
</tr>
<tr>
<td>50-59</td>
<td>9-13</td>
<td>4-93</td>
<td>4-2</td>
</tr>
<tr>
<td>60-69</td>
<td>6-10</td>
<td>2-88</td>
<td>1-24</td>
</tr>
<tr>
<td>70+</td>
<td>4-66</td>
<td>1-61</td>
<td>0-54</td>
</tr>
</tbody>
</table>

Note fewer diabetics diagnosed at young ages than expected in Coloured and Bantu (figures in italics).

---

Fig. 1. Distribution of age at diagnosis in different races.
(Uncorrected for age distribution in general population.) Note apparent differences in older age groups.

‡The term 'age at diagnosis' is used in preference to 'age at onset' because the latter is usually impossible to assess. Nevertheless, it is assumed that 'age at diagnosis' has a reasonable relation to the development of clinical diabetes.

Fig. 2. Distribution of age at diagnosis in Coloured group in comparison with expected distribution based on White group. The 'expected' distribution is based on a correction for the age-distribution of the Coloured population at risk. Note great deficiency of young diabetics.

Fig. 3. Distribution of age at diagnosis in Bantu in comparison with expected distribution based on White group. The 'expected' distribution is based on a correction for the age-distribution of Bantu at risk. Note again deficiency of young diabetics.
In both the non-White groups the actual percentage of patients developing diabetes below the age of 30 was far lower than the expected percentage. Conversely, above the age of 30 the actual percentage of non-White subjects developing diabetes exceeded the expected percentage based on the White group. The modal age for diagnosis in the White and Coloured groups was 50-59, but 40-49 in the Bantu, and this difference appears not to be caused entirely by age distributions in the populations at risk.

Obstetrical History (Married Women Only)

Miscarriages. Nearly half the women had had 1 or more miscarriages, and there was little difference between the different racial groups.

Stillbirths. 15% of White women interviewed had had 1 or more stillborn infant as against close to 25% in the non-White groups. Actual figures are: White 15%; Jew 15%; Coloured 26%; Moslem 24%; and Bantu 24%.

We cannot compare these figures with the general population of Cape Town, since no comparable recent statistics are available. More detailed figures were obtained by us previously and reported in 1952.

Parity and weight. Parity was classified into the following groups: nil, 1-3, 4-6, 7-9, and 10+. It was found that 62% of those women who had had over 7 pregnancies were more than 10% overweight. On the other hand, in the lower parity groups (nil and 1-3 pregnancies) only 27% and 42% respectively were similarly overweight (Fig. 4).

The White groups had the highest number of nulliparae (12.5% White; 8.6% Jew), with the Jewish group also having the smallest families. 64% of Jews had 1-3 children, against 43.7% of White non-Jews, and lower percentages of the non-White groups: Coloured 22.4%; Moslem 19.2% and Bantu 31.3%. Moslem families tended to be so large that almost a quarter (23.3%) had undergone 10 or more full-term pregnancies.

TABLE III. PARITY STRUCTURE IN MARRIED WOMEN

<table>
<thead>
<tr>
<th></th>
<th>Total women</th>
<th>White</th>
<th>Jewish</th>
<th>Coloured</th>
<th>Moslem</th>
<th>Bantu</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parity:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nil</td>
<td>96</td>
<td>70</td>
<td>116</td>
<td>75</td>
<td>61</td>
<td></td>
</tr>
<tr>
<td>1-3</td>
<td>33</td>
<td>145</td>
<td>121</td>
<td>82</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>4-6</td>
<td>145</td>
<td>121</td>
<td>82</td>
<td>45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7-9</td>
<td>82</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10+</td>
<td>45</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Parity figures are percentages of total in each race. Note modal family number for Whites 1-3; for non-Whites 4-6, but large proportion above 6 in Coloured and Moslem groups.

Of the Bantu 44.3% had parity figures of 4, 5 or 6, and relatively few had families larger than this. Only 3% of Bantu had no children.

Unfortunately no similar figures applying to non-diabetic women in the various ethnic groups are available for comparison.

Weight (Table IV)

The weights of patients at their first attendance at the Diabetes Clinic were recorded as well as those in 1960 and...
at the time of the study in 1963. For assessment, tables giving standard and not recommended weights for groups at different ages and of varying heights were used (in this way the diabetic population is comparable to the general population and not the theoretical recommended ideal weight). 'Obesity' is considered to exist if a patient is more than 15% over standard weight.

Dietitians using flannel graphs, books and pictures, have been advising individuals and groups about the importance of their diet much more intensively since 1960.

At diagnosis 53% of all patients were 5% or more overweight and 34·3% were obese. In 1963 53% of all patients were still 5% or more over their standard weight and 32·4% were obese. At the time of diagnosis the Bantu group was the fattest and the Jewish group was the lightest (38·% White; 25·% Jewish; 44·% Coloured; 51·% Moslem, and 60·% Bantu were more than 10·% overweight).

Between 1960 and 1963 there was a fall of approximately 4% in the number of obese people in all groups except the Bantu, in whom the number of obese patients rose by 5%.

Fig. 6 illustrates the percentage obesity in the different races and the changes that have occurred.

Sex differences in overweight. 41·% of all the women were obese, as against only 18·% of men. This rather more than 2:1 ratio was found in all racial groups. No difference in response to dietary therapy could be found between men and women. (These results are not tabulated or graphed.)

Therapy (Table V)

Approximately 70% of all racial groups except Moslems were receiving some single form of oral agent. Over 80% of the Moslems were on tablets alone. Control with more than 1 type of tablet had been attempted in a large percentage of cases. In 28% of all subjects tolbutamide had been discontinued in an effort to obtain better control with some other agent.

[Acetohexamide had only recently been introduced at the time of this survey and is not considered, though actually 5 patients in all (0·8%) were taking this drug.] Of the White group 23%; Jews 20%; Coloured 21%; Moslem 13%; and Bantu 27% were receiving insulin either alone or in combination with oral agents.

There were few patients being controlled by diet alone: 12·% White; 11·% Coloured; 4·% Moslem; and 7·% Bantu—giving a mean of 8% for the entire group.

Discussion

Family History

It is interesting that a positive family history of diabetes was most commonly found in Jews, who had the smallest families of all, and least commonly found in the Bantu, who had larger families. The differences must be accounted for by either or both (1) the incidence of diabetes being high in Jews and lowest in the Bantu (which is probably true) or (2) the Jews being most aware of diabetes and also most knowledgeable about their relatives and the Bantu being least aware and least knowledgeable. This is probably also true.

Sex

It is usual among White countries to find women diabetics outnumbering men over the age of 30 or 40 (discussed in detail by one of us elsewhere6). It was unexpected that the female to male ratio was so high (about 4:1) in all groups except the White non-Jews. Among the Bantu there are reports from other parts of South Africa suggesting a lesser difference between the sexes1,6 while a survey in Johannesburg6 and a study from Salisbury (Rhodesia)7 plainly showed a greater prevalence of diabetes among males. Obesity may be one factor in the Cape that produces overt diabetes in women, and female Bantu diabetics were far more often obese than their menfolk.

Age at Diagnosis

The apparent differences in age at diagnosis of diabetes in the 3 different groups (White, Coloured and Bantu,
Fig. 1) largely disappear when the figures are corrected for the age distribution of the general population at risk (Figs. 2, 3). The exception is at the young ages—the actual number of diabetics under the age of 30 is far less than the expected number in both Coloured and Bantu. In other words, youth-onset diabetes is much rarer in both Coloured and Bantu than in White people. This is most interesting and accords both with our clinical impression and with Seftel’s comment that in 14 years of experience among non-White diabetes clinics in Johannesburg he has not seen a single child under 10 years of age.

Parity (Table III, Fig. 5)
Since the 2 White groups tended to be older than the non-White and also to have smaller families, the different age-distribution in the different groups tends to minimize rather than accentuate the differences in parity. The fecundity of the Coloured and Moslem groups is remarkable. The 23% of Moslems who are 10 or more parous is indeed too low a figure, because some of the interviewed women will certainly have more children yet.

The Bantu families were not nearly as large as those of the Coloured groups, 4-6 children being usual.

Parity and weight. Among the general population it is commonly accepted that weight tends to rise with parity. We have found the same phenomenon in our diabetics as shown in Fig. 4. This tendency to increased weight with increasing parity appears to apply to all racial groups except the Bantu, but figures are not sufficient for detailed analysis.

Weight
Many of our patients were overweight at the time of their initial attendance at the clinic. Thus 34.3% were considered obese (i.e. 15% over standard weight) and 53.5% were 5% or more overweight. Nevertheless, these figures are considerably less than those reported from several other clinics, especially from America, though they are very similar to those found in less overfed countries (e.g. the Netherlands). It was surprising to us to find that the least overweight group was the Jewish (only 18% were obese). In earlier work Joslin et al. found that Jewish adult diabetics were frequently more obese than other patients. Possible reasons for this discrepancy include (1) sampling error by us (unlikely), (2) Cape Jews being in general more concerned with their figures than American Jews, and (3) the difference in time of the two investigations.

The 3 Coloured groups were similar to each other as regards weight (around 40% obese initially). As was expected, women were much more often obese than men in all racial groups.

In 1960 there was little difference from the weights recorded at the time of diagnosis, but more intensive dietary instruction was instituted in that year and it was hoped that a third assessment of weights might show the good effects of this. Certainly there was a small drop in the percentage of obesity in all groups except the Bantu, where the obesity rate rose from 46% to 51% in 1961. This total apparent lack of effect of dietary instruction in the Bantu is presumably due to (1) incomplete rapport and inability of this group to understand sufficiently, and (2) the difficulty of a low-income group in purchasing a reasonably pleasant low-calorie diet. This unfortunate lack of result occurred despite our formulation and explanation of a special low-income low-calorie diet written in Xhosa and designed particularly for Bantu patients.

It must be admitted that the over-all effect of dietary instruction on weight loss appears to have been very slight indeed.

Therapy
Diet only. Disappointingly few diabetics were being controlled by dietary measures alone—this itself indicates a considerable amount of failure in this connection. It was to be expected that rather more White people were on ‘diet only’ (12%) than non-White (6%).

Tablets. The overwhelming majority of patients now take tablets, single or in combination, and this is perhaps a reasonable state of affairs where dietary means alone are insufficient. Sulphonylureas are the most popular, tolbutamide and chlorpropamide being used in approximately equal amounts. About 28% of all patients were seemingly tolbutamide failures (not necessarily pure drug failures) and about 9% were chlorpropamide failures. The combination of a sulphonylurea with a diguanide seems to be gaining in favour, though the diguanides were seldom being used alone.

Insulin was being used in some 18% of all patients, while nearly this number (15%) had switched from insulin to oral drugs. On the other hand only 6% of all cases were total failures to oral drug therapy and needed insulin after trial of tablets. It is plain that the maximal combination of sulphonylureas plus diguanides is very potent indeed and comparatively seldom fails in the older patient provided he will maintain a reasonable diet.

Summary
A study has been made of certain characteristics of diabetics of different ethnic groups attending a diabetes clinic.
LENGTHY SURVIVAL IN SYSTEMIC LUPUS ERYTHEMATOSUS
A CASE REPORT

M. HORWITZ, B.Sc., M.D. (CAPE TOWN), M.R.C.P. (LOND.), Department of Medicine, University of Cape Town and Somerset Hospital, Cape Town

Marian W. Ropes, in the Walter Bauer Memorial Issue of Medicine in 1964, states that the concept of the natural history of systemic lupus erythematosus, even without steroid therapy, has changed dramatically. "The old picture of a relatively unremitting course, terminating in most patients within a few years, has gradually been replaced by one in which remissions of some degree occur in the majority of patients, and 30% or more live over 5 years." A case is presented of survival after 15 years. The patient is well after 13 years continuous steroid therapy, but the presence of LE cells can still be demonstrated. She has no features of hypercortisonism.

It is believed that she was the first case of this disease in Cape Town diagnosed by the demonstration of LE cells and treated with cortisone. In a subsequent pregnancy there was no exacerbation of the disease and she delivered a normal infant.

CASE REPORT

The patient, a Cape Coloured woman with 2 children, was born in 1917. She recalls being ill in 1933 with swelling of the legs, feet, hands, and face, accompanied by difficulty in passing urine for a couple of days. She was in bed for 8 months. No records or objective features of this illness can be obtained, so its nature remains obscure.

1950: Polyarthritis
Joint pains developed insidiously with an indefinite relationship to a recent miscarriage. Pains occurred in the fingers, wrists, toes, ankles, and knees every few days. At times the fingers were swollen. Outpatient notes in May 1951 mention that she fairly often got attacks of 'sore throat'.

1951: Pleurisy with Effusion; Drug Fever
On 1 August 1951 she attended the medical outpatient department at Groote Schuur Hospital, with left pleuritic pain, feverishness, and sweating of 10 days' duration. Chest X-ray showed a left anterior costo-phrenic effusion. The finger joints were swollen. During August 1951 she felt weak, had anorexia, lost weight, and the joint pains worsened. There was some improvement during September 1951. In October 1951 left pleurisy, feverishness, and anorexia recurred, leading to her first admission to Groote Schuur Hospital. There were clinical and radiological signs of left pleural effusion. No tubercle bacilli were detected in the effusion or in 3 gastric lavages. The ESR was 64 mm. Westergren in 1 hour.

As tuberculosis is often thought to be the commonest cause of idiopathic pleural effusion, antituberculous therapy with streptomycin and PAS was commenced. After 1 week the temperature rose to 104°F and persisted. When the drugs were discontinued, this high pyrexia promptly subsided. She improved, the effusion decreased clinically and radiologically, and she left hospital of her own accord.

1952: Dermatitis; Secondary Pyogenic Skin Infection and Adenitis; Pyrexia; Loss of Weight; Alopecia; Demonstration of LE Cells
During 1952 her health deteriorated. She felt very weak, tired, cold, anorexic, and complained of generalized bodily pains and ill-defined abdominal pain. In April a rash appeared on her face and her scalp hair started to fall out. The buttocks became painful followed by an abscess in the right posterior auricular lymph node. She became progressively more ill and weak, and her general practitioner referred her for urgent readmission on 4 April 1952.

She was emaciated, weak, and extremely ill, too ill and weak to be weighed accurately. Temperature 100°F, pulse rate 130 beats per minute, and respiration rate 25 beats per minute. She lay on her right side owing to a saucer-sized ulcer over the sacrum. The skin over other pressure points was very thin. There was a scaly erythematous rash on the 'butterfly' area of the face and nose, extending to the ears. The nose was blocked. Erythematous lesions were present on the fingers. Scalp hair was patchily diminished. A scalp abscess was accompanied by an abscess in the right posterior auricular lymph nodes. The mucous were very pale. There were erythematous lesions on the palate. There was no objective arthritis and all other systems were clinically normal. Blood pressure 100/80 mm Hg.

Investigations. Urine contained 1+ albumin, 10-20 cells (thought to be renal epithelial cells) per high-power field, a few WBCs, and very scanty hyaline casts. Hb. 6.3 G/100 ml;