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DIABETES MELLITUS IN TEACHING STAFF OF PESHAWAR UNIVERSITY

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ABSTRACT:

A survey of diabetes mellitus in teachers of Peshawar University was carried out during September, 1993 to February, 1994. A proforma was developed. Blood and urine samples were analysed. Out of 340 persons, eleven (3.2%) were found diabetic, in which four were newly diagnosed. The disease was more common in males as compared to females. Increased prevalence was observed in older subjects, thus showing correlation with age in both sexes. Family members of 40.3% patients were also victim of the same disease. The major complications of diabetes include hypertension, obesity, kidney damage and ischemic heart disease. Routine screening of population for diabetes is recommended.

INTRODUCTION:

Diabetes mellitus is a chronic disease. It is controllable but not curable in most of the eases. In this disease the patient fails to get the complete benefit of the food, particularly carbohydrate due to low secretion of insulin by pancreas. As a result, much of sugar accumulates in the blood and passes out of the body through the kidneys. The patient becomes weak and complication of almost every system of the body is resulted. Being a precursor of various disorders, it produces heart disease, stroke, kidney damage, nerve damage, pregnancy complications and birth defects in children of diabetic mothers.' Morris suggested that two diabetics should not marry one another, because theoretically if they had a hundred children, all would develop the disease.[2]

Several reports regarding the incidence of diabetes are available. An increased prevalence of this disease was found in the Australian Aborigines and Yementic Jews, who migrated to Israel.[3] Another study showed 0.67-5% diabetic eases in Asia with peak in 50-60 years' age.[4] In Pakistan 5-7% of the adult population suffer from this disease.[5] In Karachi alone there are about 200,000 known diabetics in a population of one million, of which 43% are males and 57% are females.[5] Hence the intensity of diabetes varies from country to country and even among different parts of the same country. Its rate is associated with obesity, increased sugar consumption, rapid urbanization, lack of exercise, poor economic conditions, wrong dietary habit and change in life style.[6] The university teachers are thought to be aware of these factors. The present study was therefore, designed to determine the frequency of diabetes in teaching staff of Peshawar University.

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MATERIALS AND METHODS:

A total of 340 teachers (Male-232 and Female-108) from three colleges and post graduate departments of Peshawar University were selected for this study (table-1). Their age range was 28-58 years. Information regarding age, height, weight, previous history of ailment, laboratory investigation and family medical history were recorded on a proforma. The urine samples from each individual were collected in clean bottles and analyzed for sugar by using Benedict's solution.[7] From positive cases, 2 ml blood samples (fasting and random) were also taken by disposable syringes and blood glucose was determined by ortho-toluidine method.[8]

Table-1: DISTRIBUTION OF SUBJECTS

Name of Institution	Male	Female	Total
Postgraduate Department, Peshawar University	156	25	181
Islamia College, Peshawar University	76	—	76
Jinnah College, Peshawar University	—	45	45
Home Economics College, Peshawar University	—	38	38
	232	108	340

RESULTS:

Out of total cases, eleven were found diabetic, thus showing an overall incidence of 3.2%. The number of positive cases in the male group was 9 (3.9%) while it was 2 (1.9%) in the female group. Amongst positive eases 7 (male-6 and female-1) were previously known and 4 (males-3 and female-1) were newly diagnosed. Only three cases (all males) were found to have this disease below 40 years of age. Eight patients were in the age group between 41-58 years. No one had glycosuria. A family history of diabetes was present in 40.3% patients. The important associated complications in diabetic teachers include hypertension (3 cases), obesity (2 eases), ischemic heart disease (one case) and kidney damage (one ease).

DISCUSSION:

Diabetes mellitus is a lifelong disorder affecting carbohydrate, fat and protein metabolism. Its prevalence is constantly rising in the developing countries. In our study we found 3.2% eases of diabetes in teaching staff of Peshawar University. These results are higher than the 2.9% incidence in rural area and lower than 4.9% in urban area of Islamabad.[3] There is also a great disparity between our data and that reported (1.4%) in general population of district Abbottabad.[9] The possible reason for the conflict may be age and diet difference of the subjects. The increased prevalence of diabetes has also coincided with change from traditional to modern life style.[10]

We also observed that diabetes is more common in male teachers. Our results are in contrast with previous research worker who reported higher prevalence in women.[5] The reason may be that female teachers in the university were more careful about their diet, health and hence were less

obese than the males. In the present study, 36.4% new cases of diabetes were diagnosed. Similar findings were obtained earlier.[1'] The possible factors that could be implicated are decreased physical activity, increased diet and such psychosocial factors as stress. Majority of positive cases were found in above 40 years' age. These results are in agreement with other studies showing a rising diabetes prevalence with age.[12] The profile of complications like hypertension, obesity, kidney damage and ischemic heart disease in our patients was also generally in common with what is seen elsewhere.[1]

The data of the present study warrant regular screening for diabetes even in people younger than 40 years of age. Known diabetics are to be educated regarding management in order to avoid complications.

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