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The present study was conducted in the department of Medicine, MLB Medical college Jhansi. The subjects were taken from the Diabetes OPD, Medicine OPD and those who were admitted to wards. The study included 90 patients with type 2 diabetes detected within 3 months. The study was conducted from Sep 2002 to Dec 2003.

Of the 90 patients studied 59 were males and 31 were females (table I). Maximum number of patients (38%) were in the 50-60 years age group followed by 20% in the 40-50 group (table II), 3 patients were less than 30 years of age and type 1 diabetes in them was excluded on the basis of absence of history and present status of ketoacidosis.

67% of the patients in the present study belonged to the middle socioeconomic group and along with the upper class constituted nearly 72% of patients (table III). This finding seems to be consistent with the fact that diabetes prevalence is increasing because of obesity and reduced physical activity.

If we consider the symptoms at the time of diagnosis, nearly 60% patients presented with the classical symptoms of polyurea, polydipsia and weight loss (table IV). This compares with United
Kingdom Prospective Diabetes Study (UKPDS), where nearly 60-65% patients presented with classical symptoms. Nearly 46% patients had features of neuropathy in the form of tingling in the limbs or pain in the lower limbs alone or in combination with classical symptoms. This is in contrast to the UKPDS finding of only 20-25% patients who presented with symptoms of paraesthesia. But our findings are similar to that of Singh et al who report a prevalence of 47% of neuropathy in newly diagnosed patients.

Nearly 10% patients were detected routinely most commonly when being posted for surgery. This finding is somewhat similar to that observed in the third National Health and Nutrition Examination Survey (NHANES), where 6-7% of patients were found to be diabetic on routine detection.

Infections particularly those of skin and soft tissues are common in diabetes and can be the first manifestation of the disease as shown by Patel et al in Papua New Guinea. In our study nearly 11% patients presented with infections mainly those of skin.

A family history of diabetes was found in only 16% of patients. (Table V)

If we consider the Body Mass Index (BMI) of the population studied, nearly 58% of patients are in the normal BMI range of 18.5-24.9 (TABLE VI). 30% of patients had a BMI of more than 25.0. These findings are consistent with the observation of various
workers notably McKeiuge et al in England and Banerji et al, that Indians are at an exaggerated risk of insulin resistance and diabetes at a relatively lower BMI, probably due to an excess total body fat composition and by the fact that they are centrally obese as judged by their abdominal circumference. Fernando et al found obesity in 16% of patients. Nearly 11% patients had a BMI of less than 18.5 and belonged to the group of LB type 2 diabetes.

Table VII shows that nearly 44% of the subjects had hypertension at the time of diagnosis. UKPDS has reported a prevalence of 39% in newly diagnosed patients. Fernando et al found hypertension in 23% while Krahulec B et al found it in 66% of patients. Hypertension is clearly associated with insulin resistance although the strength and nature of association remain unclear.

When we consider the lipid profile of the study group, nearly 46% of the patients had LDL-C in the range of 100-130 mg%(table VIII). According to the national Cholesterol Education Program ATP 3 report, this group requires therapeutic lifestyle changes.

Nearly 29% of patients had their LDL-C levels above 130 mg% which calls for initiation of drug therapy. Only 24% of the patients had their LDL-C levels below the goal of 100 mg%.

When we consider the triglyceride (TG) levels nearly 34% patients had their triglyceride levels in the range of 150-200 mg% calling for therapeutic lifestyle changes and nearly 43% patients
had their TG levels more than 200 mg% which requires initiation of drug therapy. This finding seems to be consistent with the fact that diabetes causes raised triglyceride levels. Krahulec B et al found hypertriglyceridemia in 66% patients.

When we consider the HDL-C levels 32% males had their levels less than 40 mg% while 83% of females had their HDL-C levels less 50 mg%. These findings tend to suggest that HDL-C levels are more prevalent in females than males. Howard et al in the Strong Heart study found that dyslipidemia in women tends to be more severe than in men.

Table XII shows the 24 hour urinary protein excretion. Nearly 8% patients had a protein excretion of more than 150 mg in 24 hours. Ballard et al in their group of patients also found 8% proteinuria. Brookmeyer et al found the prevalence of nephropathy to be 8-18%.

Table XIII shows that nearly 83% of patients had normal fundus on examination. 4% patients had evidence of macular edema while preproliferative changes in the form of exudates, hemorrhages and cotton wool spots in various combinations were found in nearly 12% of patients. None of the patients was found to have proliferative changes. These findings are very similar to those of UKPDS which reported 18% patients having retinopathy at the time of diagnosis. Fernando et al in their study also found
retinopathy in 15% patients, Choudhary et al found retinopathy in 17% while Talu et al in 11.7% of patients.

When we consider the ECG changes in the study group (table XIV), 88% patients had normal ECG. 6% had evidence of ischemia while 2% had evidence of infarction. Another 2% patients had left ventricular hypertrophy. The 8% prevalence of CAD compares with the 14% prevalence found by Singh et al and 5% found by Nambuya et al.

Table XV shows features of neuropathy either in the form of symptoms or clinical examination. 27% patients had complaints of tingling in the lower limbs, 11% had pain in both lower limbs while another 7% had a combination of the two. 18% patients had loss of ankle reflexes on examination. UKPDS had 13% patients presenting with loss of ankle reflexes.

When we consider infections, nearly 12% of our patients had skin and soft tissue infections while 5% had evidence of pulmonary tuberculosis (table XVI). Skin and soft tissue infections are particularly common in diabetics probably due to defects in immune system.

It is generally accepted that pulmonary TB is more prevalent in diabetics than in non diabetics. Various workers have reported the prevalence of pulmonary TB in diabetics to vary from 0.5% to 15%. But more studies need to be done to establish whether the
prevalence of TB in diabetics is more than in non diabetic population.