Introduction: Diabetes mellitus (DM) is a metabolic, non communicable disorder which is growing in prevalence globally, with Diabetic nephropathy being a major cause of morbidity and mortality. Three percent of newly diagnosed type 2 Diabetes Mellitus patients have overt nephropathy. Microalbuminuria strongly predicts development of nephropathy in NIDDM. It is a marker of vascular endothelial dysfunction. It is defined as "urinary albumin excretion more than 30mg/24hr (20microgram/min) and less than 300mg/24hr (200microgram/min)." Nephropathy is the major cause of illness and death in NIDDM patients as it progresses to end stage kidney disease. Hence, it is necessary to detect nephropathy in the early stage in type 2 DM patients.

Materials & Methods: The study was carried out in the Outpatient Department of Diabetics, Tirunelveli Medical College Hospital (TVMCH). The duration of the study was seven weeks (July 14, 2012 to August 25, 2012). The study was conducted on 39 newly diagnosed diabetics. Inclusion criteria: All the patients presenting to the OPD and have been recently diagnosed with type 2 DM. (from jan 2012 onwards). The criteria for diagnosing diabetes were the same as those laid down by WHO. (1) Symptoms of DM plus RBS > 200mg/dl. (2) Fasting plasma glucose >126 mg/dl and (3) Two hour plasma glucose >200mg/dl during an oral glucose tolerance test. Exclusion criteria: (1) Patients with pre existing kidney disease (2) Patients with cardiac failure Operational Modality: The patients were subjected to detailed history and clinical examination. Early morning urine samples were collected from the 39 patients attending the OPD twice at an interval of 3 weeks after ruling out urinary tract infection and sepsis. Laboratory tests include detection of microalbumin using micral test, estimation of fasting and post prandial blood sugar using oral glucose tolerance test, estimation of serum creatinine using Jaffe's method. The blood pressure of all the patients were recorded.

Results: Thirty Nine patients of newly diagnosed type 2 diabetics, were studied from July to August of 2012. Of the 39 patients studied, 22 were male and 17 were female. The incidence of nephropathy in newly diagnosed type 2 diabetics was 17%. There was significant difference between incidence of diabetic nephropathy in both the sexes (Figure - 1). It was 22.55% in male while only 6.25% in females. Incidence of nephropathy increased with age (Figure - 2). It was 1.8% in age group 21-40, 22% in age group 41-60 and increased to 30% in age group >60 yrs. Incidence of nephropathy increased significantly with increase in blood pressure (Figure - 3). It was 0% in group < 120/80 mmHg, 6.63% in blood pressure 120/80 – 139/89, 38% in blood pressure 140/90-159/99 and 66.67% in blood pressure >160/100mmHg.

Discussion: Diabetic nephropathy is a complication of Diabetes Mellitus with high morbidity, hence the need for its early detection. It has been reported that nephropathy occurs in 20% of type 2 diabetics at 5 years and 40% by 10 years. Incidence of nephropathy is 1-10 fold greater in type 2 diabetics compared to type 1 diabetics. It is also two times common in type 2 diabetics in comparison to type 1 diabetics.

Abstract: Nephropathy is a common complication in diabetes mellitus (DM), with significant morbidity and mortality. The aim of the present study is to study the incidence of nephropathy in newly diagnosed type 2 diabetics and to study the relationship of development of nephropathy with various risk factors associated with DM, like age, sex and blood pressure. A prospective hospital based study over a period of seven weeks was carried out in the Outpatient Department of Diabetes, TVMCH. A total of 39 patients who were diagnosed with type 2 diabetes since January 2012 were selected. 24 hour urine samples were collected and analysed for the presence of microalbumin. Presence of urinary microalbuminuria in atleast two samples over a period of 7 weeks was taken as criteria for detecting nephropathy. Incidence of nephropathy in newly diagnosed type 2 diabetics was 17%. It increased significantly with increase in age and was 30% in age group >60 years. It also has significant correlation with male sex and blood pressure with incidence of nephropathy being as high as 66% at BP> 160/100 mmHg. Keywords: microalbuminuria, type 2 non insulin dependent diabetes mellitus (NIDDM), diabetic nephropathy.
is seen in 15-18% of patients with newly diagnosed type 2 diabetes.\textsuperscript{1,2,3,4} Our study was done to confirm whether these reports are applicable to our rural south Indian population. Our study also confirms that 17% of recently diagnosed patients developed nephropathy in our study group. It was seen that nephropathy was more common in males (22.55%) as compared to females (6.25%). Also, most of the patients in 40-60 years age group developed nephropathy. The incidence of nephropathy is seen to increase consistently with age, suggesting the detrimental effect of age on development of nephropathy.

**Conclusion:** Excess mortality and morbidity in patients with type 2 DM is mainly due to end stage renal disease. This can be prevented by early detection of kidney lesions through routine investigations. Microalbuminuria strongly indicates an underlying kidney pathology and predicts development of diabetic nephropathy in NIDDM. In conclusion, the incidence of nephropathy in newly diagnosed type 2 diabetics is as high as 17%. The incidence of nephropathy has significant correlation with male sex, increasing age and elevated blood pressure. Further evaluation and study is ongoing.

**REFERENCES**

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