Introduction

India will be harbouring 70 million diabetics by 2025 [1]. The basic metabolic abnormality in diabetes is the presence of pathological hyperglycaemia. Studies like the DCCT [2] and the UKPDS [3] and several others [4],[5] after them, have shown that strict glycaemic control can avert or at least postpone the occurrence of long term diabetic complications. Fasting plasma glucose (FPG), postprandial plasma glucose (PPPG) and random plasma glucose (RPG) are common laboratory requisitions for the screening and diagnosis of diabetes. Glycated haemoglobin or HbA1c concentration provides a better assessment of the glycaemic control over the previous two - three months and also allows the calculation of the mean glucose value (MGV) [6]. Inclusion of MGV values in the patient’s report, along with HbA1c would result in a better comprehension of their glycaemic control. The presence of urinary microalbumin is a definite marker of latent or overt nephropathy [7]. The prevalence of microalbuminuria at various degrees of glycaemia and the prescribing patterns of clinicians with a respect to diabetes management was thus chosen to be studied.

Materials and Methods

A cross sectional data survey was undertaken from September 2005 to August 2006 at the Clinical Biochemistry laboratory, Kasturba Medical College Hospital (KMCII), Ambedkar circle, Mangalore, India. The laboratory supports tertiary care to patients in and around Mangalore. Apart from samples from two of the institutional multidisciplinary hospitals, we processed samples which were received from two Government hospitals and also those from a large number of walk-in patients with requisitions from private practitioners, which constituted a major percentage of our sample input. Thus, this study represents a cross section of the prescribing patterns of clinicians in and around this city.

All investigational requisitions were scrutinized for FPG, PPPG, RPG, HbA1c and Urinary microalbumin. The values were noted after processing the samples.

Plasma glucose and HbA1c were estimated using commercially available kits from Roche-Hitachi Systems which were analyzed on a Hitachi 917 autoanalyser. The glucose oxidase- peroxidase method [8] was followed for glucose estimation. The ‘Tina quant’ method [9],[10] for the determination of HbA1c is based on the turbidimetric inhibition immunoassay for whole blood haemolysed with tetrade cyl trimethyl ammonium bromide.

The Accu-Chek Micral test is a semi quantitative test for the determination of urinary microalbumin in the range of 20-100mg/L in the first void sample. The result is read against a colour scale which is expressed as –ve or 20, 50 and 100 mg/L by the laboratory.

Since clinical history is very often not written on the requisition slip, we could not consider the age, sex, type of diabetes or the purpose of the request (screening, diagnosis, treatment adjustment, follow-up etc.) while computing the data. Repetition of investigations if any were also included. The study was initially intended for a period of two years, with subsequent follow up for