PREVALENCE OF RENAL FAILURE IN DIABETES TYPE 2: RESULTS FROM A POPULATION STUDY AND THE BELGIAN ESRD REGISTRY

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OBJECTIVES: To study the prevalence of renal failure in a large sample of type 2 diabetes patients in Belgium and to compare the results with the data of the Belgian ESRD registry. METHODS: A total of 5353 patients, 2530 males and 2823 females, suffering from type 2 diabetes and treated with oral antidiabetic drugs were recruited from the patient files of 345 Belgian general practitioners. Age, gender, body height, body weight, and serum creatinine were recorded. Renal function was calculated using a BMI-corrected Cockroft-Gault formula and the abbreviated MDRD formula. Annual incidence of diabetics starting renal replacement therapy was retrieved from the Belgian national ESRD registry and diabetes prevalence data from the Scientific Institute of Public Health. RESULTS: The mean age was 68 years in females and 64 years in males. The mean body weight was 76.01 kg in females and 84.64 kg in males. The mean serum creatinine was 1.04 mg/dl (range: 0.5–3.0 mg/dl) in females and 1.14 mg/dl (range: 0.5–10.2 mg/dl) in males. Serum creatinine levels had a tendency to rise, both in females and males, from the age of 60 years. Renal function showed a tendency to decrease with age, regardless of the method of calculation. If we compare these results with those found in a Belgian study of the general population, we observed that the 3rd percentile of the renal function estimate in diabetics was almost identical to that of the general population. The annual incidence of ESRD among diabetics type 2 is 23 per million inhabitants. Given a prevalence of diabetes of 2.6%, the annual incidence of ESRD can be calculated as 0.088%. CONCLUSIONS: Apparently, there is no excess renal failure in the diabetes population and the decrease in renal function with advancing age is identical in both populations. ESRD among diabetics type 2 is rare.

THE IMPACT ON GLYCEMIC CONTROL OF DIABETIC PATIENTS BY A HOSPITAL PHARMACIST-MANAGED COMPLIANCE CLINIC IN HONG KONG

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OBJECTIVES: Diabetes Mellitus (DM) is a major health care issue potentially causing prolonged ill health and premature death. Good adherence to prescribed diabetic regimen is important to prevent complications but it needs supports from a variety of health care professionals. This study was to explore the non-compliance profile of diabetic patients and to evaluate the clinical benefits by a pharmacist-managed diabetes clinic on the degree of glycemic control through the provision of diabetic information and the implementation of a drug compliance enhancement program for the non-compliant diabetic patients. METHODS: Patients with poor medication compliance were recruited to receive three counseling sessions carried out by a hospital pharmacist. The baseline levels of compliance and hemoglobin A1C (HbA1C) were documented. The responsibility of the pharmacist in the clinic was to educate all patients individually regarding diabetes and its complications and on the proper use of their medicines. Patients were reassessed and reinforced on their levels of compliance and medication knowledge during the subsequent visits. The primary outcome measurement was the change in HbA1C over the 12-month study period. RESULTS: Ninety-five patients were recruited during the 12-month study period with 91 patients completed the study. Improvement of HbA1C was observed as compared with the first clinic visit to the final clinic visit (7.43, b 1.57% to 7.15, b 1.33%, p < 0.005). The mean compliance level improved significantly from 41.3% to 97.8% (p < 0.005). CONCLUSION: The study suggested that pharmacist-managed compliance clinic for non-compliant diabetic patients was effective and had a clinical impact on the glycemic control of patients. Pharmacist can play an important role in implementing and monitoring diabetic therapy along with the multidisciplinary team effort in diabetes management.

AN ANALYSIS OF THE RELATIONSHIP BETWEEN RAPID TRANSITION TO INSULIN, AREA UNDER THE CURVE FOR HBA1C MEASURES ACROSS TIME AND DIABETES-RELATED COMPLICATIONS: A GERMANY POPULATION BASED STUDY

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OBJECTIVES: The objectives were to assess whether rapid transitioning in newly diagnosed type II diabetics from diet and exercise to insulin results in better blood glucose control as measured by HbA1C and reduced diabetes-related complications. METHOD: We used longitudinal data from IMS Mediplus-Germany for newly diagnosed type II diabetics between June 1993 and May 2001 with at least two HbA1C readings. Patients with complications at baseline were excluded. Treatment was categorized as diet and exercise, sulfonylureas, antihyperglycemic drug combinations, insulin or insulin plus another agent. Modifications to treatment were tracked and rapid use of insulin was either initial insulin use or immediate change from diet and exercise to insulin. Area under the curve (AUC) for HbA1C was calculated and