

The management of type II diabetes in patients with chronic kidney disease: a population-based study in Southern Italy

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Diabetes mellitus in patients with chronic kidney disease (CKD) is known as diabetic kidney disease (DKD). The pharmacological management of DKD is challenging due to reduced renal excretion of drugs. The aim of this population-based study was to explore antidiabetic drug use in DKD patients from Southern Italy. The record-linkage Arianna database from Caserta LHU was used. Persons with diabetes and incident CKD (first diagnosis date: index date (ID)) were identified by searching for ICD9-CM codes among hospital discharge diagnoses/procedures and/or indication of drug use. To evaluate change in antidiabetic drug use following CKD diagnosis in diabetic patients, prevalence of antidiabetic drug use among DKD patients was calculated within 1 year prior to/after ID and after dialysis entry. A Kaplan-Meier analysis was used to assess the time to discontinuation of antidiabetic drugs after ID. The frequency of antidiabetic drugs contraindicated in renal disease among DKD patients was measured. Overall, 725 patients with diabetes had incident CKD from 2006 - 2011. The use of combination antidiabetic drugs, biguanides and sulphonamides decreased by approximately 10%, 7% and 5% respectively after ID. The use of insulins increased by 10% after ID and by 20% after entry into dialysis. The use of antidiabetic drugs not contraindicated in CKD decreased marginally after CKD diagnosis. In conclusion, in a Southern Italian general practice setting, the management of type 2 diabetes mellitus changed only marginally in diabetic patients who were newly diagnosed with CKD, suggesting therapeutic inertia of the prescribers. Our findings highlight the need for educational interventions in primary care to improve the quality of prescribing in patients affected by chronic diseases such as diabetes mellitus and chronic kidney disease.