

Intensive prospective monitoring of anti-diabetic drugs in type II diabetes mellitus: a comparison between general practice and diabetologists in Sicily

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Background: The prevalence of type II diabetes mellitus (DM) in Southern Italy is around 6%. Antidiabetic drugs are important for preventing complications of DM and several newly-developed compounds (e.g. incretins) have been recently marketed. Quality of care provided by either general practitioners (GPs) or diabetologists for the management of type II DM patients may differ, as some antidiabetics may be prescribed exclusively by specialists (e.g. incretins).

Objective: Aim of this prospective cohort study carried out in Sicily was to evaluate the prescribing pattern of antidiabetics in general practice and diabetologist specialist center settings.

Methods: Six diabetologists centers and 60 GPs from Sicily have been involved in the study. Data have been collected between October 1st 2010 and December 31st 2012. Type II DM patients who started any antidiabetic drugs have been enrolled in the study. Demographic and clinical data were collected through questionnaires, administered by GPs or diabetologists, at baseline and after 1 and 2 weeks, and 1, 2, 3, 6, 8 and 12 months. Patients have been classified as *new users* (no previous antidiabetic treatment) *switcher* (if treated previously with another antidiabetic which was withdrawn) *as add-on* (if an antidiabetic drug was added to one or more antidiabetic treatment already in place). Frequency analyses of demographic and clinical characteristics of different anti-diabetic users enrolled in the two settings at baseline have been conducted. In addition, we evaluated the changes in the in HbA1c from baseline to one year follow-up in antidiabetic users who were monitored by GPs or diabetologists.

Results: Overall, 1,687 diabetic patients have been enrolled in the study, and, of these, 661 (39.2%) were recruited by diabetologists, and 1,026 (60.8%) by GPs. Overall, the mean age was 66.4 ± 11.0 years and GPs enrolled higher proportion of very old patients (>80 years) as compared to diabetologists (13.1% vs. 7.3%). Mean duration of DM was 10.5 years [Standard Deviation (SD): 8.4] and it was shorter for patients recruited by GPs (9.0 ± 8.0) than for those recruited by diabetologists (11.2 ± 8.8); BMI (mean ± Standard Deviation): 29.8 ± 6.1; 906 men and 781 women, obesity was 42.4% for patients recruited by GPs and 48.6% for those recruited by diabetologists.

At baseline, higher rates of DM complications such as cardiovascular events (25.2%); neuropathy (11.5%); retinopathies (14.7%) and nephropathy (14.7%) have been observed in patients enrolled by GPs as compared with those recruited by diabetologists. Drugs prescribed to patients recruited by GPs were more frequently biguanides (41.0%), fixed combination of oral hypoglycemic agents (16.3%), and insulins (13.0%) while those prescribed by diabetologists were mainly insulins (21.4%), biguanides (20.5%), and incretins (17.7%). A significant reduction of the average values of Hb1Ac was reported during the first year of follow-up in both settings (from 8.0 ± 1.4 to 7.0 ± 1.5 in GP setting; from 8.3 ± 2.9 to 7.0 ± 3.0 in specialist setting).

Conclusion: This study shows relevant differences in the prescribing pattern of antidiabetics in GP and specialist settings. On the other hand, intensive monitoring may improve the management of the type II DM patients in both settings, as demonstrated by the Hb1Ac reduction over the first year of follow-up.