EFFECT OF STATINS TREATMENT ON CHOLESTEROL LEVELS AND HOSPITALIZATION FOR CARDIOVASCULAR DISEASE IN THE LOCAL HEALTH UNIT OF TREVISO

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Objective: The beneficial effect of lipid-lowering drugs, in particular of HMG-CoA Reductase Inhibitor (statins), is well documented. However, their utilization is often suspected to be too low.

In this observational retrospective study, the aim was to analyse the use of statins, the association of adherence to statins' treatment with achievement of a target total cholesterol level (CL<200mg/dl), and any association of adherence to the time to first hospital admission for cardiovascular disease (CVD) in hypercholesterolemic patients treated with statins, in Local Health Unit (LHU) n° 9, Treviso, between 1994-2003.

Methods: Demographic, laboratory and pharmaceutical data were retrieved from databases of LHU n° 9, Treviso. Patients were defined high or poor adherent if they received more than 80% and 50% of the prescribed therapy, respectively. Serums CL were measured three months before the first prescription of statin, at the moment of the prescription, and three months later. Cardiovascular admissions were included only after statins therapy. The clinical complexity of the patient was evaluated trough a proxy-variable consisting in co-prescriptions (antidiabetics, antihypertensive and aspirin).

Results: The patients enrolled were 5,028. The predictors of goal achievement were evaluated using a multiple binomial logistic model. The dependent variable was the goal achievement (CL after three months of therapy under 200mg/dl) and the independent variables were age, gender, statins, basal cholesterol, adherence and year of prescription. All of these variables were related to the outcome. The logistic model suggests that patients more prone to achieve stable CL under 200 mg/dl are older, male and more adherent to the therapeutic program.

Each variable, described above, was inserted in a Cox regression model, to determine any association with hospital admission. The risk of first hospitalization increases with age and gender (male *vs* female). Patients with polytherapy were more prone to be hospitalized. The risks of hospitalization increase with adherence, but patients more adherent to statins' therapy are older and have more risk factors.

Conclusions: The therapy of hypercholesterolemic patients needs to be improved making aware both patients and physicians on the importance of the use of statins for the long term reduction of CL. And the Cox regression model seems to indicate that old male patients with polytherapy are more at risk of first admission in spite of good adherence to statins' therapy.