Impact of diabetes mellitus on the selection of antiplatelet treatment and medium-term prognosis after acute coronary syndrome

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INTRODUCTION. Patients with diabetes mellitus (DM) have a higher atherothrombotic risk and higher rates of recurrent ischemic events compared with the non-diabetic population. Although current antiplatelet therapy strategies have been shown to be successful in improving outcomes in acute coronary syndrome (ACS), patients with DM continue to experience high rates of adverse cardiovascular events. Today, it is known that diabetic patients are characterized by a deregulation in different intracellular signaling pathways, which leads to an inadequate or suboptimal response to antiplatelet agents. The purpose of this study is to analyze the different therapeutic strategies, the use of new antiplatelet drugs and medium-term prognosis in diabetic patients compared with non-diabetic patients who have suffered an ACS.

METHODS. It is an observational, prospective and multicenter registry of patients with ACS. The objective is to analyze the differences in the management of DM patients vs non-DM patients in the acute phase and their evolution during the first year after coronary event. Antiplatelet therapy administered will be evaluated, type of coronary injury and treatment performed, major adverse events as well as cardiovascular complications and mortality at one year of follow-up.

RESULTS. Of a total of 1717 patients, 38% were diabetic. The diabetic population was older, with a higher prevalence of cardiovascular risk factors and higher rate of previous cardiovascular events (cerebrovascular, peripheral arterial disease and coronary disease). Patients with DM received less new antiplatelet drugs at admission (15.5% DM vs 26.5% non DM, p <0.001) and less in-hospital switch to new antiplatelet agents was performed. They were subjected to a lower number of catheterizations and at the time of revascularization, the drug-eluting stent was of choice. During admission, they developed more complications, both ischemic (refractory angina, reinfarction or CVA) and hemorrhagic. Following one year, DM had higher major cardiovascular events (MACE) and higher mortality (7.72% vs 5.14%, p = 0.0039). Non-coronary revascularization, renal failure, and reduced ejection fraction were predictive variables of death in diabetic population. Treatment with new antiplatelet drugs was associated with a statistically significant decrease in total mortality an MACE without differences in major bleeding.

CONCLUSION. More than a third of patients with ACS are diabetic. These patients present with more severe coronary disease associating a greater number of cardiovascular events and a higher mortality rate after one year of ACS. However, despite this, they undergo less invasive tests and they were undertreated with the new antiplatelets therapies.