long-term cardiovascular and non-cardiovascular safety and efficacy of SGLT2 inhibitors.

RESULTS Nine trials with 23035 patients were included. SGLT2 inhibitors were associated with a statistically significant reduction in risk of MACE (odds ratio [OR]: 0.87; 95% confidence interval [CI]: 0.79 to 0.96; P=0.005; number needed to treat [NNT]: 291), all-cause mortality (OR: 0.80; 95% CI: 0.67 to 0.96; p=0.02; NNT: 137), cardiovascular mortality (OR: 0.78; 95% CI: 0.60 to 1.00; p=0.05; NNT: 161), hospitalization for heart failure (OR: 0.67; 95% CI: 0.56 to 0.81; p<0.001; NNT: 119), hospitalization for heart failure or cardiovascular death (OR: 0.73; 95% CI: 0.62 to 0.87; p<0.001; NNT: 73), and progression of albuminuria (OR: 0.75; 95% CI: 0.61 to 0.92; p=0.006; NNT: 19). No significant differences in risk of non-fatal myocardial infarction or non-fatal stroke were found. TSA of MACE and all-cause death confirmed the findings and suggested that future trials might not be required as this significant association is unlikely to be changed. SGLT2 inhibitors significantly reduced incidences of hypoglycemia and acute kidney injury, but were associated with a modestly higher incidence of urinary tract infection, and a 3-fold higher risk of genital infection in both female and male patients. SGLT2 inhibitors significantly reduced HbA1c level compared with controls, with a weighted mean difference of -0.39% (95% CI: -0.52 to -0.26).

CONCLUSION Our meta-analysis provides robust reassurance about the long-term cardiovascular non-cardiovascular safety of SGLT2 inhibitors with sustained efficacy in reducing markers of vascular risk. SGLT2 inhibitors showed remarkable cardiovascular- and renal-protective benefits, and should be considered in type 2 diabetes patients with high risk for cardiovascular disease.

CATEGORIES CORONARY: Diabetes

TCT-819

Prediabetes and its Impact on 1-Year Clinical Outcome After Treatment with Newer-Generation Drug-eluting Stents in 2,986 All-Comer Patients

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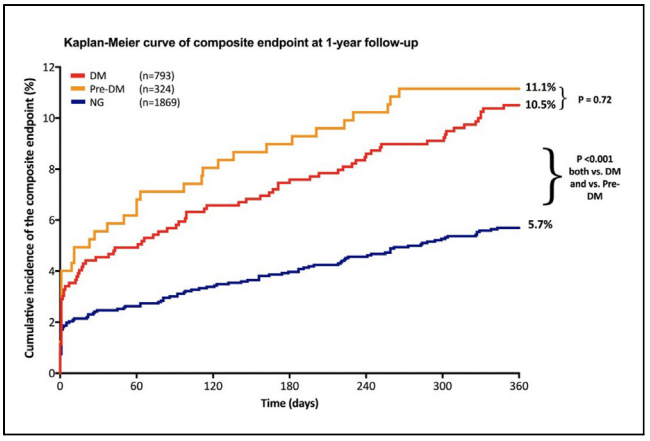
BACKGROUND Prediabetes (Pre-DM) is a risk factor state for developing diabetes mellitus (DM). Yet it is unclear whether detection of Pre-DM by routine assessment of glycated haemoglobin A1c (HbA1c) and fasting plasma glucose (FPG) among patients undergoing percutaneous coronary intervention (PCI) may help identify subjects with increased event risk. We assessed in all-comers who underwent PCI with contemporary drug-eluting stents (DES) the relation between glycaemia status and 1-year clinical outcome.

METHODS HbA1c and FPG was determined in 2,362 non-DM participants in the multicenter, randomized, investigator-initiated TWENTE III trial, in order to identify Pre-DM (HbA1c 42-47mmol/mol; FPG 6.1-6.9 mmol/L) and DM (HbA1c≥48mmol/mol; FPG >7 mmol/L). Another 624 patients had medically treated DM. The main clinical outcome parameter was a composite endpoint consisting of death, myocardial infarction, or revascularisation.

RESULTS Glycaemic state was known in 2,986 trial participants: Pre-DM was present in 324 (11%), DM in 793 (27%), and normoglycaemia in 1,869 (63%) patients. Patients with Pre-DM and DM differed from normoglycemic patients in cardiovascular risk factors. The composite clinical endpoint in Pre-DM occurred in 11.1%, in DM in 10.5%, and in normoglycemic patients in 5.7% (p<0.001). Mortality rates were higher in Pre-DM (3.5%) and DM (3.1%) than in normoglycaemia (1.2%, p=0.001). Patients with Pre-DM had a 2-times higher event risk than normoglycaemic patients (adjusted HR 2.0, 95%CI:1.4-3.0).



CONCLUSION Following PCI with contemporary DES, all-comers with Pre-DM had a significantly higher adverse event risks than normoglycemic patients. In non-DM patients who require stenting for obstructive coronary disease, routine assessment of HbA1c and FPG appears be of clinical value to identify subjects with increased event risk.

CATEGORIES CORONARY: Diabetes

TCT-820

Is the admission hyperglycemia during STEMI a predictive factor for undiagnosed diabetes?

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BACKGROUND Many studies have confirmed the negative impact of hyperglycemia on admission on the prognosis during early stages of acute coronary syndroms for both diabetic and non-diabetic patients. But fewer have established a relation between this hyperglycemia and the diagnosis of new cases of diabetes. In fact, admission hyperglycemia can be the reflect of either an unknown diabetes, a hyperglycemia related to stress or a combination of those two situations. The objective of this study was to determinate the prevalence of type 2 Diabetes Mellitus following a STEMI among a population of patients without a prior history of diabetes. And analyze the relationship between hyperglycemia on admission and diagnosis of new cases of diabetes in a population of STEMI without a history of diabetes

METHODS We conducted a prospective multicenter cohort study of 1418 non diabetic patients admitted during the acute phase of a STEMI during a period of 15 months. All patients benefited from a blood glucose test at admission to hospital and glycated hemoglobin (HbA1c) test for the diagnosis of new cases of type 2 Diabetes Mellitus

RESULTS The prevalence of undiagnosed diabetes among non diabetic patients admitted during the early stage of STEMI was 13.8% For the glycemia on admission and with a cutoff of 1.70g/l appears to be a descriminating test for the prediction of newly diagnosed diabetes during hospitalization for ACS (AUC=0,965 CI 95% [0,954 - 0,977]) the Sensitivity was 96,4% (CI 95% [92,6 - 98,4]) and Specificity 82,6% (CI 95% [80,384,6]),a PPV of 47% and above all an excellent NPV of 99,3%.

CONCLUSION Type 2 Diabetes Mellitus is common among patients with ACS. Its screening should be done ideally through the assesment of glycated hemoglobin level. Admission Glycemia can represent a early and simple way for selecting patients at high risk to have an undiagnosed diabetes and thus we can in a second stage propose to them a screening the HbA1c blood test.

CATEGORIES CORONARY: Diabetes