Review Article

Percutaneous Coronary Interventions in Diabetic Patients

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Diabetes confers a greater risk of developing coronary artery disease and harbors a worse long term prognosis with medical therapy compared to non-diabetic patients. Diabetic patients have a higher incidence and greater mortality from myocardial infarction compared to non-diabetics. Accordingly, myocardial revascularization is frequently required to treat diabetic patients with coronary artery disease. The long term outcomes of diabetic patients with coronary artery disease are worse than those of non-diabetic patients whether a medical, interventional or surgical approach is utilized. This is extremely important to recognize, because the presence of diabetes greatly increases the patient.s risk for complications and restenosis. The long term follow-up of clinical trials comparing percutaneous transluminal coronary angioplasty (PTCA) versus surgical revascularization illustrates that surgical revascularization remains the recommended strategy for diabetic multivessel coronary heart disease (CHD). However, recent advances in percutaneous coronary interventions (PCI) have resulted in a changing paradigm for coronary artery revascularization in diabetic patients. The present article analyzes the outcomes of the clinical trials comparing CABGS versus PCI in the three different stages of the technological advance in the development of PTCA: balloon angioplasty, conventional stenting, and, more recently, drug eluting stents which seem to have improved the outcomes of PTCA in diabetic patients. In light of these results, current recommendations from international guidelines are discussed in order to choose the revascularization treatment in these patients. Finally, the results of recent studies, as the BARI 2D and CARDIA trials, are reported. Ongoing studies like the FREEDOM trial are mentioned, which will probably provide further evidence to define the indications of percutaneous revascularization in diabetic patients in a more accurate fashion.