Summary

■*Background*: The safety and efficacy of drug-eluting stents (DES) among more generalized patients than those enrolled in pivotal randomized controlled trials are controversial (Dibra A , et al 2005). Patients with diabetes mellitus have less favorable outcomes after percutaneous coronary intervention (PCI) than non-diabetics (Abizaid , et al 2004).

■ *Aim of the work* : is to evaluate the efficacy and outcome of DES compared with bare metal stents (BMS) in diabetic patients with coronary artery disease following percutaneous coronary intervention and to study the factors which contribute to and determine this outcome.

■*Patients & Methods* : This study is a multi centers, prospective, systematic & randomized study , was conducted in Banha university catheterization unit, Cairo university catheterization unit & Cairo catheterization centre in El-Borg hospital during the period from March 2007 to February 2008 , The study included 60 (type II) diabetic patients who were randomly classified into two groups, 30 patients treated with (BMS) & 30 patients treated with (DES) all patients are followed up for at least one year

■*Results* : DES (compared with BMS) were associated with no detectable differences in overall mortality or non fatal myocardial infarction (MI) (p value > 0.05) ,with a significant 13.34% reduction in target vessel revascularization (TVR) & in stent restenosis (ISR) (20% vs 6.66%) (P value < 0.01) , angiographic outcome was significantly better (minimal lumen diameter MLD (2.23 vs 1.78 mm) , % stenosis (20.9 vs 36.8%) , late lumen loss (0.34 vs 0.76 mm) , net gain (1.7 vs 1.2 mm) & loss index (0.1 vs 0.3) for all (P value < 0.01) , incidence of sub acute & late stent thrombosis was relatively higher in DES with non significant difference , no difference in mortality or non fatal MI in using BMS or DES in both on & off label use . TVR/ISR were significantly reduced with DES vs BMS in off label use , angiographic outcome was significantly improved with DES vs BMS in off label use . Mortality & non fatal MI not affected with type of diabetes treatment (oral hypoglycemic vs insulin) , while insulin treated patient had non significantly worse angiographic outcome in both BMS & DES.

■*Conclusion* : No significant differences were observed in one year follow up of death or non fatal MI after DES or BMS use in diabetics for either off label or on label indications . our study demonstrated marked & comparable reductions in TVR & improving in angiographic outcome with DES compared with BMS. using DES in diabetics with off label use significantly reduce TVR/ISR & improve angiographic outcome , incidence of sub acute , late stent thrombosis was non significantly higher in DES with no effect on cardiac mortality . no effect of diabetes treatment on clinical or angiographic outcome .