Objectives: To evaluate the one year outcome of everolimus eluting bioresorbable scaffold in patient with non-ST segment elevation acute coronary syndrome.

Background: According to the current practice, drug eluting stents are the treatment of choice in wide presentation of coronary artery disease. The BVS is considered a significant step forward in the advancement of coronary intervention, however data of these novel devices in patients with high thrombotic burden is still limited.

Methodology: Prospective cohort comparative study conducted over patients diagnosed with NSTE-ACS and admitted to cardiology department at Juan Ramon Jimenez university Hospital, Huelva, Spain and received one or more scaffold for treatment of de-novo coronary artery lesion. The data was compared with that of patients presented with the same diagnosis to critical care department, Cairo University Hospitals, Cairo, Egypt during the same period of time and received second generation durable polymer everolimus eluting stent; the Xience prime . The primary end-points were device oriented and scaffold thrombosis.

Results: We implanted 73 BVS in 46 NSTE-ACS patients and 44 Xience prime stents in 40 patients with NSTE-ACS. BVS group were younger with more incidence of smoking and less incidence of DM. They had higher TIMI risk score at presentation and most of them presented with NSTEMI rather than UA. Procedural success was obtained in all study population. Mean FU duration was 12 months. We have total of 13% device-oriented composite end points in the BVS group versus 5% in the DES group (P value=0.275). We had one cardiac death in the DES group (p value =0.465) and one non-fatal MI occurred in both groups (p

value=1). Clinically driven target lesion revascularization occurred in 11% of the BVS group while none of the DES group had TLR (P value=0.058). We had four definite in-scaffold thrombosis in the BVS group and one possible stent thrombosis in the DES group.

Conclusion: BVS implantation in NST-ACS is non-inferior to DES however high rates of scaffold thrombosis and clinically driven TLR mandate further evaluation in randomized controlled trials.

Key words:

Implantation of Bioabsorbable Vascular Scaffold