

## **Drug –Eluting Versus Bare Metal Stent Implantation for Unprotected Left Main Coronary Artery Stenosis**

Dahud Qarawani, Menachem Nahir, Diab Ganem, Yonathan Hasin  
*Cardiovascula Department, Poria Medical Center, Tiberias, Israel*

### **Objectives**

This study was designed to compare the clinical and angiographic outcomes of drug -eluting stent (DES) and bare metal stent (BMS) implantation for unprotected left main coronary artery (LMCA) stenosis.

### **Background**

The safety and effectiveness of DES implantation for unprotected LMCA stenosis have not been ascertained.

### **Methods**

One hundred and sixty two consecutive patients underwent unprotected LMCA stenting between January 2001 and May 2008 . The majority of the patients presented with acute coronary syndrome (88.9%), while the rest (11.1%) had stable angina. At least one year clinical follow up was available for all patients and angiographic follow up for 84%. Angiographic , interventions and follow up data of the 122 patients who received BMS were compared to those of the 40 patients who received DES.

### **Results:**

The procedural success rate was 100% for both groups. There were no incidents of death, or emergent bypass surgery during procedure in either group.

Compared to the BMS group, the DES group had more bifurcation lesions (75% vs. 29.5%,  $p = 0.001$ ), more multivessel involvement (58.4% vs. 10.7%,  $p = 0.001$ ), a smaller stent diameter ( $3.25 \pm 0.63$  mm vs.  $3.92 \pm 0.71$  mm,  $p = 0.001$ ), and a longer stent length ( $21.6 \pm 12.5$  mm vs.  $11 \pm 5.3$  mm,  $p = 0.001$ ). Compared to BMS group, in the DES group more interventions were performed to other arteries (45% vs 65% ,  $p = 0.01$ ).

The overall angiographic LM restenosis rate were significantly lower in the DES group than the BMS group (5.8 % vs. 13.7%,  $p = 0.01$ ). At one year follow up acute myocardial infarction occurred in low rates ( 2.5% vs 2.4%,  $p = 0.82$ ). In hospital mortality was low and equal for both groups (2.5 vs 3.2 ,  $p = 0.88$  ) . At one-year follow-up, mortality rate was similar between the two groups ( 7.5% vs 7.3% ,  $p = 0.78$  ). Target lesion revascularization at one year was performed in two DES patients (5.8%) and 12 BMS patients (11.7%) ( $p = 0.01$ ).

### **Conclusions**

Drug-eluting stent implantation for unprotected LMCA stenosis appears safe with regard to acute and long term complications and is more effective in preventing restenosis compared to BMS implantation.