A real world experience of Drug Eluting And Non-drug Eluting Stents In Lower Extremity Peripheral Arterial Disease.

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Objective(s): Drug-eluting stents (DES) have been promoted as an alternative to the traditional non-drug eluting stents (nDES), and offer the potential for improved patency rates. However, DES are more expensive than nDES, and results comparing these stents outside of clinical trials have been limited.

Methods: A retrospective review was performed on all inpatient infrainguinal lower extremity endovascular procedures between January 2014 and September 2016, which involved stent implantation. Procedures involving the common femoral artery, superficial femoral artery, and above knee popliteal artery were included. The type of stent, number of stents, length of each stent, and location of stent were recorded for each procedure. End-points included stent thrombosis, restenosis, re-intervention, and limb loss. Post-operative arterial duplexes were obtained every 3 months to determine stent patency during follow-up visits through the end of the study period. In-stent stenosis was defined as >60% narrowing on arterial duplex. Thrombosis was defined as in-stent occlusion, and limb loss involved only major amputations in the treated
extremity. Multivariate analysis, Bivariate analysis and Students two-sample T-test were used to analyze the data.

**Results:** 212 patients underwent a total of 252 procedures during the study period. Of this group, 191 procedures met inclusion criteria. The average patient age was 73.2±11.6 years, 68.6% had hypertension, and 58.1% had diabetes. The most common indication for intervention was claudication (53%), followed by critical limb ischemia (47%). 124 procedures involved only nDES (Lifestent), 46 procedures involved only DES (Zilver), and 21 procedures involved both DES and nDES (mixed). Comparison of nDES and DES showed the rate of thrombosis (11.1% vs 16.7%, p=0.81), re-intervention (13.7% vs 14.3%, p=1.0), and limb loss (9.7% vs 0.0%, p=0.38) was equivalent between the groups. The 6-month primary patency rate for nDES and DES (41.9% vs 40.0%, p=1.0) were also equivalent. On average, the average lengths of nDES were longer than DES (19.2±14.3 cm vs. 11.4±5.7 cm) (p<0.0001). Mixed nDES and DES results showed a 33% re-stenosis rate, 7.1% thrombosis rate, and no limb loss. The mixed stent patency rate at 6 months was 28.6%. There were no statistical differences between the nDES or DES groups with respect to gender, age, laterality, diabetes mellitus, coronary artery disease, gangrene, ulcers, hyperlipidemia, atrial fibrillation, deep vein thrombosis, claudication, ipsilateral bypass, re-stenosis, thrombosis, limb loss, or ipsilateral amputation. Bivariate analysis showed a higher incidence of hypertension for nDES patients (p=0.001).

**Conclusions:** In this retrospective analysis from one institution, the use of a nDES or DES did not result in a statistically significant difference in the rate of thrombosis, re-stenosis, ipsilateral re-intervention, or ipsilateral amputation over a 2-year period when used in the CFA, SFA, and above knee popliteal artery.

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