

OBJECTIVE To report the post angioplasty profile of single-stenting technique from distal unprotected left main coronary artery (LMCA) to Major side branch.

MATERIAL AND METHODS We have retrospectively analyzed the data of patients with Distal LMCA bifurcation lesions presented to the Nizam's Institute of Medical Sciences, Hyderabad, India between 2010 to 2013 who underwent intervention with single stent crossover technique to distal unprotected LMCA.

RESULTS A total of 83 patients underwent distal LMCA intervention, LMCA-LCX in 35 patients (42%) and LMCA-LAD in 48 patients (58%). 75 patients (90 %) had significant side branch disease and in all both branches were wired. Post stenting of the main vessel only 12 patients (13%) required treatment to side branch (stenting in 7 patients & balloon in remaining 5) due to TIMI 2 flow. The bifurcation angle ranged from min 45 degrees to max 170 degrees, however only 3 patients required final kissing balloon technique. Post PCI all patients had TIMI-III flow in both the vessels.

CONCLUSION In distal LMCA bifurcation lesions, LMCA to main vessel stenting can be performed safely with conventional single stenting technique irrespective of the presence of significant side vessel disease across wide range of main vessel angulations with good end result. It may therefore be important to evaluate alternative strategies for treating distal LMCA bifurcation disease.

CRT-100.60

Outcomes of Bioresorbable Scaffold Use for the Treatment of Bifurcating Lesions: A Global Study Analysis



Mohammad M. Ansari,¹ Daniel Garcia²

¹Texas Tech University Health Sciences Center, Lubbock, TX; ²Ochsner Heart and Vascular Institute, New Orleans, LA

INTRODUCTION Bioresorbable vascular scaffold (BVS) is demonstrated to be clinical equivalent to drug eluting stents (DES) for the treatment of de-novo coronary artery disease. One of his properties is the thicker struts being completely degraded by 24-36 months. Data reporting clinical outcomes is scarce. We aimed to evaluate the global experience of bifurcating lesion treated with BVS.

METHODS We searched Pub Med, Cochrane and Embase for all the clinical data reporting clinical outcomes of bifurcating lesions treated with BVS. We reported number of patients, lesions, sex, type of bifurcation per Medina classification, location of the bifurcation. Clinical outcomes included 30 days mortality, long-term mortality, stroke, AMI, target lesion revascularization (TLR), scaffold thrombosis (ST) and stenting technique. We reported the number in percentage value.

RESULTS Six studies provided a total of 415 patients and 466 lesions. 76% of these patients were men. LAD and diagonal were the most common site of bifurcating lesions (> 50%). More than half (51%) of the lesions were true bifurcation (101,011,111). There was 0.5% mortality at 30 days and 1.2 % at long-term follow up (1 year). There was no stroke and 1.4% of AMI. TLR rate was 7.4% and ST 1.4%. Stenting techniques included V shaped in 1.8% of the cases, T shape in 6.6%, and culotte in less than 1%.

CONCLUSION Our analysis suggests that BVS can safely used for bifurcating lesions with good clinical outcomes. Its unique characteristics of absorption can prevent the side branched jailing as it occurs with DES. Comparison between two devices should be pursued with RCT's.

CRT-100.61

Bleeding And Mortality Following PCI Is Predicted By Age: Insights From The Dartmouth Dynamic Registry



Shawn X. Li, Jiyong Lee, Hannah Chaudry, Theodore Curran, Vishesh Kumar, Bruce Andrus, James DeVries
Dartmouth-Hitchcock Medical Center, Lebanon, NH

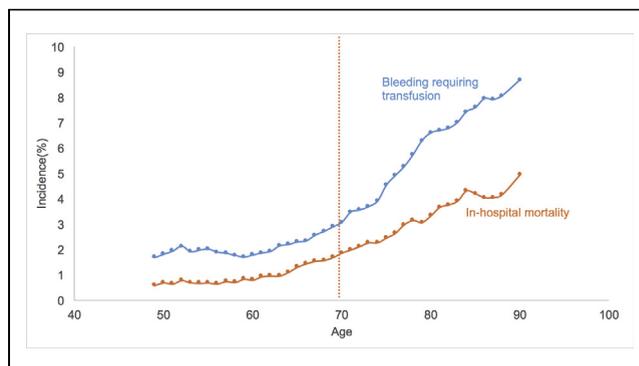
BACKGROUND The very elderly are the fastest growing segment of the US population. Decisions regarding PCI in the elderly will need to be made with increasing frequency in the future, and there is uncertainty whether age alone should be used to limit access to

PCI. Previous studies have shown that very elderly patients have higher bleeding risks and mortality, but it is unclear at what age these risks become prohibitive. This study aims to describe the relationship between age and in-hospital mortality and post-procedural bleeding.

METHODS The Dartmouth Dynamic Registry was queried for all consecutive PCI cases between the years 2000-2015. Patients were grouped based on age. Demographic, procedural, and in-hospital outcomes were analyzed. Bleeding requiring transfusion and mortality were reported as running averages by ten year increments of age. Standard statistical methods were used to report outcomes.

RESULTS Between 2000-2015, 17,599 patients underwent PCI. The average patient age was 65, and 28% were female. Incidence of smoking, hypertension, hypercholesterolemia, and CKD were 50%, 69%, 67%, 29%, and 10% respectively. Figure 1 demonstrates the relationship of age with both bleeding requiring transfusion and mortality. Bleeding and mortality risks remain relative constant until the age of 70, at which point risks for both rise in a linear fashion. The most elderly patients (age >90) have the highest risk of both bleeding and mortality.

CONCLUSION For patients up to age 70, there is no increased risk of bleeding or mortality with increasing age. Above age 70, there is a rapid increase in both bleeding and mortality. Efforts to better understand and mitigate the increased risk in this rapidly growing population are warranted.



CRT-100.62

High Bleeding Risk Influences the Use of Metallic Stents



Sang Yeub Lee,¹ Jang-Whan Bae,¹ Rebecca Torguson,² arie Steinvil,² Toby Rogers,² Edward Koifman,² Sarkis Kiramijyan,² Hector M. Garcia-Garcia,² Ron Waksman²

¹Chungbuk Regional Cardiovascular Center, Cheongju-Si, Republic of Korea; ²Medstar Washington Hospital Center, Washington, DC

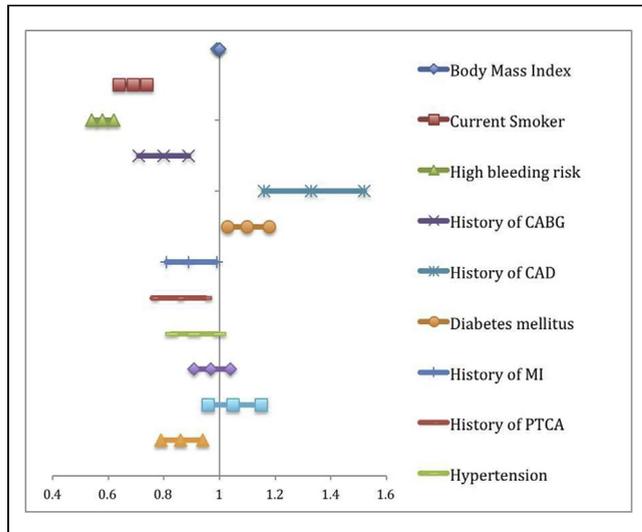
BACKGROUND Patients undergoing percutaneous coronary intervention (PCI) with Drug eluting stents (DES) are subject to prolonged dual antiplatelet therapy (DAPT) which can lead to increase in bleeding rate in high bleed risk (HBR) population. The aim of this study is to examine the effect of HBR on the likelihood of receiving a drug-eluting stent (DES).

METHODS Patients undergoing PCI in the DES era (April 2003 to September 2015) were retrospectively analyzed. HBR is defined as patients who required to meet one or more of the high bleeding risk criteria of LEADERS FREE trial.

RESULTS In this period, 25,441 patients who underwent PCI, 10,594 (41.6%) met HBR definition. The most frequent HBR criteria were: age >75 years in 5723 (54.0%), CCr < 40 ml/min in 2507 (23.7%), prior stroke in 1951 (18.4%), and Hgb in <11 g/liter 1885 (17.8%). Some patients had one or more HBR criteria: One HBR criterion 6626 (62.5%), two 2761 (26.1%) and three 2761 (8.98%). In the multivariable logistic regression the OR for HBR patients to receive at least one DES was 0.58 [0.54, 0.62], p <0.001 when adjusted for known risk factors.

Within the HBR group alone, patients with 3 or more HBR criteria were less likely treated with DES than patients with one or two risk factors (OR 0.50 [0.44,0.57], $p < 0.001$). Having a pre-procedure Hgb < 11 g/L had an OR of 0.51 [0.45-0.57, $p < 0.001$] to receive at least one DES. However, all individual HBR factors were independently significantly associated with a less likelihood to receive a DES, except for the need of glucocorticoid use at discharge (OR 0.86 [0.73-1.02, $p = 0.076$]).

CONCLUSION Given the era of extended DAPT duration post PCI for secondary prevention and the finding that the likelihood to receive DES drops with the increase in HBR risk factor count, the optimal treatment of patients with at least one HBR risk factor needs to be further explored.



CRT-100.63

Sex Differences In Outcomes Following PCI: Are We Finally Narrowing The Gap?

Jiyong Lee,¹ Hannah I. Chaudry,¹ Shawn X. Li,² Kyung Min Lee,³ Theodore B. Curran,² Vishesh Kumar,¹ Bruce W. Andrus,¹ James T. DeVries¹

¹Dartmouth Hitchcock Medical Center, Lebanon, NH; ²Geisel School of Medicine, Lebanon, NH; ³George Mason University Schar School of Policy and Government, Arlington, VA

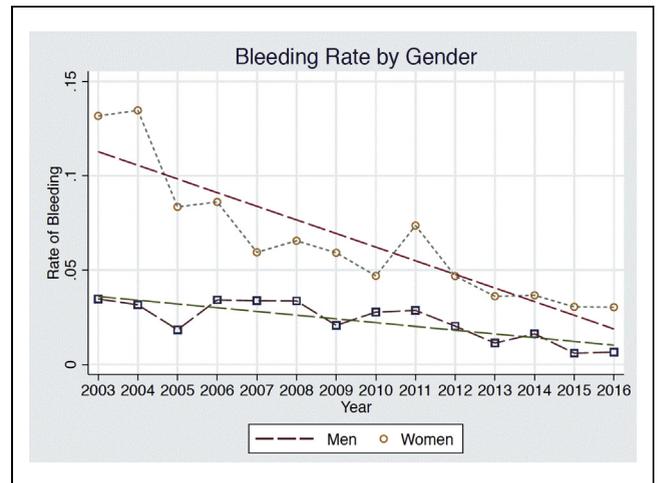
INTRODUCTION Women undergoing percutaneous coronary intervention (PCI) are at a higher risk for bleeding and vascular complications than men. Multiple approaches have been utilized to reduce bleeding, including radial access, reduced GP IIb/IIIa inhibitor use, increased vascular closure device use, and novel antithrombotic regimens. Nevertheless, few studies have assessed the impact of the bleeding reduction techniques on the gap between women and men in bleeding and vascular complications following PCI. We sought to quantify bleeding and vascular complications over time between women and men.

METHODS We queried The Dartmouth Dynamic Registry database for consecutive PCI's performed at Dartmouth Hitchcock Medical Center between January 2003 and 2016. Basic demographic information, procedural characteristics, and in-hospital outcomes were collected. Bleeding was defined as retroperitoneal bleeds or need for transfusion within 72 hours of procedure. Vascular complications included pseudoaneurysm, AVF, large hematoma (>8 cm), or other complications requiring intervention. Outcomes were reported graphically and using standard statistical techniques.

RESULTS Between the years 2003 and 2016, we identified 15,396 PCI cases, of which 4,414 (40%) were performed in women. Radial

artery access increased from none in 2003 to nearly 40% in 2016. Use of GP IIb/IIIa and femoral access decreased substantially over the same time. The overall bleeding and vascular complication rates decreased more for women than men, narrowing the gender gap (Table 1).

CONCLUSION The incidence of bleeding and vascular complication fell between the years 2003 and 2016. The gap between women and men has narrowed over time, primarily due to improved outcomes for women.



CRT-100.64

Hybrid Coronary Revascularization Versus Coronary Artery Bypass Grafting in Patients with Multivessel Coronary Artery Disease, A Meta-Analysis

Partha Sardar
University of Utah, Salt Lake City, UT

BACKGROUND Hybrid coronary revascularization (HCR) involves a combination of surgical and percutaneous techniques, which in selected patients may present an alternative to conventional coronary artery bypass grafting (CABG). A meta-analysis was performed to evaluate the effectiveness of HCR compared to CABG for the treatment of multivessel coronary artery disease (MVCAD).

METHODS Databases were searched through June 30, 2016, and studies comparing HCR with CABG for treatment of MVCAD were selected. We calculated summary odds ratios (ORs) and 95% CIs with the random-effects model. The primary outcome of interest was the occurrence of major adverse cardiac events (MACE), defined as a composite of all cause mortality, myocardial infarction and stroke.

RESULTS The analysis included 2,245 patients from 8 studies (1 randomized controlled trial and 7 observational studies). The risk of MACE with HCR and CABG were 3.6% and 5.4%, respectively (OR, 0.53; 95% CI, 0.24-1.16). Compared to CABG group, patients in HCR group had similar risk of all cause mortality (OR, 0.85; 95% CI, 0.38-1.88), myocardial infarction (OR, 0.72; 95% CI, 0.31-1.64), stroke (OR, 0.53; 95% CI, 0.23-1.20), and repeat revascularization (OR, 1.28; 95% CI, 0.58-2.83). The need for postoperative blood transfusions (OR, 0.29; 95% CI, 0.14-0.59) and hospital stay (weighted mean difference -1.20 days; 95% CI -1.52 to -0.88 days) was significantly lower in the HCR group.

CONCLUSION HCR appears to be safe, and has similar outcomes when compared with conventional CABG. HCR can be a suitable alternative to conventional CABG in select patients with MVCAD.