Case Summary. Placement of stent strut on side branch ostium is not rare in clinical situation, however the status of neo intimal coverage on the drug-eluting stent (DES) struts, which are placed across the side-branch vessels, remains unclear. Here we reported unexpected thrombotic events on floating stent strut after cessation of dual anti-platelet therapy.

**BIFURCATION AND LEFT MAIN STENTING**

(TCTAP C-042 TO TCTAP C-067, TCTAP C-228)

TCTAP C-042

Optimal Management of Major Coronary Bifurcation Stenosis Using Silver Hawk Atherectomy Device a Novel Approach

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[CLINICAL INFORMATION]

Patient initials or identifier number. DW

Relevant clinical history and physical exam. 54 yrs old female with T2DM, smoker, high cholesterol with elevated triglycerides, diffuse diabetic vasculopathy with previous coronary bypass surgery LIMA to LAD, SVG to RCA in 2006. Status post stent to SVG to RCA 9mths ago. Presented to Emergency with acute non-trans mural lateral wall myocardial infarction.

Relevant test results prior to catheterization. Elevated troponin level at 13.5 with CPK of 345.

Hgb and CBC normal, Platelet count 463K.

Bun/Cr 33/1.44.

Chest X-ray consistent with mild pulmonary congestion.

EKG sinus rhythm with 3mm ST segment depressions in leads I,aVL, V-4,5,6 and 1mm ST segment depressions in inferior leads.

Relevant catheterization findings. Saphenous vein graft to RCA with stent in the mid segment with degenerative distal disease.

LIMA to LAD patent with diffuse diabetic vasculopathy of distal LAD.

Left Main patent with large left Circumflex coronary artery with a large bifurcating obtuse marginal branch. Left circumflex not grafted. Critical bifurcation stenosis of left Circumflex (culprit lesion).

[INTERVENTIONAL MANAGEMENT]

Procedural step. Intravenous Integran in infusion initiated (front loading) in the emergency with 300mg clopidogrel loading. Intravenous Integran maintained during PCI. Intravenous heparin bolus administered for PCI. Femoral access with 6Fr sheath, exchanged for 8Fr sheath after angiography for coronary Intervention (PCI).

Left main cannulation using XB 3.5 8Fr guiding catheter. Double wiring of Left Circumflex bifurcation stenosis using two extra support mailman guide wires.

Pre-dilatation of critical lower branch of the bifurcation stenosis with 2.0mm balloon at 4 atmospheres pressure.

SilverHawk SS device passes, piece-meal approach, in both the branches of the bifurcation stenosis.

Double kissing balloon assisted Single stent implantation of lower branch only.

ACT maintained > 300 seconds during PCI.

Successful access site closure after 8Fr sheath removal in cath lab with Mynx extra-vascular closure device post PCI.
Case Summary. Silver Hawk atherectomy device is a versatile device. Due to low profile shaft and soft tapering tip it is safe and feasible to be used in coronary interventions.

For Major bifurcation stenosis debulking and limiting or avoiding stenting is optimal approach.

Double wiring the bifurcation is essential for bifurcation atherectomy to avoid perforation and for optimal debulking.

Running an atherectomy device with a second guide wire in place is safe.

Clear understanding of the operation of the device and optimal technique are essential for safe usage of Silver Hawk device in coronary interventions.

TCTAP C-043
Is It Dissection or Plaque Migration Proximally Following Left Anterior Descending Artery Stenting?

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[CLINICAL INFORMATION]
Patient initials or identifier number. MAN 14
Relevant clinical history and physical exam. 62 year old male
Known to have poorly controlled Type II Diabetes Mellitus and Hypertension.
He was on oral hypoglycemic agents and angiotensin receptor blockers irregularly
Quit smoking 6 months ago.
Presented with effort angina - CCS class III,
Mildly obese, BMI 28.6
HR 88/min, sinus rhythm, BP 160/100, No evidence of arrhythmias, heart failure or LV dysfunction.

Relevant test results prior to catheterization. ECG - Sinus rhythm, 90/min, ST depression and T inversion In v3-v6, lead I, avL
ECHO - concentric LVH, EF 65%, Mild LV diastolic dysfunction
Cardiac troponins were negative
Treadmill test - poor effort tolerance; had angina and 2-2.5 mm ST depression in II, III, AVF and V4-V6 in stage II of Bruce protocol

Relevant catheterization findings. CAG - Type 3 LAD with a tight 90% proximal LAD discrete lesion, Distal LAD and branches free of disease.
LCX dominant, gives rise to an early large OM1, a distal OM2 and a terminal LPDA - all of which are free of disease.
RCA is a small system, non-dominant and has disease distally.

[INTERVENTIONAL MANAGEMENT]
Procedural step. LMCA cannulated with a 6 F EBU guide catheter, lesion in the LAD crossed with a Sion blue guidewire, and directly stented with a Rapstrom 3.5 x 13 DES deployed at 12 atmos x 30 seconds.

Immediately after stenting, check shot showed significant narrowing of the LAD proximal to the stent extending right up to the ostium of the LAD.

Spasm was ruled out, as the narrowing persisted despite repeated injections of NTG. Despite administration of Intracoronary bolus doses of GP II b /III a antagonists, the flow did not improve. Hence a dissection or plaque migration into the proximal LAD was suspected.

LCX was wired and it was decided to stent from the ostium of the LMCA into the proximal LAD stent using a 4 x 24 DES.