and 24.0 (interquartile range 33) in the poor LDL group, with no significant difference (p=0.88). Furthermore, the clinical severity of ACS was worse in the good LDL group, as evidenced by a higher mean GRACE score (149.7 ± 41.1 vs. 137.1 ± 38.4, p=0.02). Among those with good LDC control, logistic regression analysis identified age (OR: 1.06, 95% CI: 1.01–1.11) and chronic kidney disease (OR: 9.14, 95% CI: 1.08–77.70) as potential predictors of severe ACS.

Discussion These findings suggest that low LDL cholesterol levels may not always correlate with reduced ASCVD risk, possibly due to underlying chronic diseases, increased inflammation, and the presence of highly atherogenic cholesterol particles. Crucially, however, the paradoxical association between good LDL control and poor clinical outcomes in ACS patients warrants further investigation.

Conclusion This study highlights the need for a deeper understanding of the mechanisms linking low LDL cholesterol to severe ACS. Furthermore, the findings raise concerns about the sufficiency of LDL as a sole target for ASCVD prevention, emphasizing the potential role of inflammation and other lipid parameters in patient risk stratification.

APCU 39 ORBITAL ATHERECTOMY IN A CALCIFIED RIGHT CORONARY ARTERY: RETRIEVAL OF THE ENTRAPPED CROWN

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Introduction The orbital atherectomy system (OAS) is a device used to ablate calcified coronary lesions during percutaneous coronary interventions (PCI). Optimal calcified plaque modification facilitates optimal stent placement and expansion. Nevertheless, its utility carries an uncommon risk of crown entrapment which may require a snare or an invasive surgery for its retrieval. This report describes a successful case of retrieving an entrapped diamond crown, which is detached from its wire, using a microcatheter.

Case Presentation A 60-year-old gentleman with a non-ST elevation myocardial infarction underwent coronary angioplasty for a severely calcified right coronary artery with diffuse stenosis. Amplatz Left 1 (AL 1) was engaged and the lesion was prepared using the Diamondback 360 Orbital Atherectomy System. The atherectomy was performed at 80,000 rpm with progressive escalation up to 120,000 rpm, at which point the system experienced an abrupt halt. Withdrawal of the crown results in a breakage that separates the crown from the atherectomy system leading to crown entrapment. Angiography revealed a sealed perforation in the target lesion. Due to the unavailability of a snare, a FineCross microcatheter was advanced over the OAS traction wire toward the trapped crown. The crown was successfully captured and retrieved as it adhered to the microcatheter. Final angiography showed a concealed perforation with TIMI 2 flow.

Discussion Coronary artery calcification emerges as a sequela in the genesis of atherosclerotic plaque. Its emergence is contributed by several factors such as advanced age, diabetes mellitus, hypertension, and chronic kidney disease. The two distinct types of calcifications are vascular intimal and medial calcifications, with the former being more commonly found. Owing to the risk of major adverse cardiovascular events contributed by the presence of moderate to severe coronary artery calcifications, an orbital atherectomy has been introduced as a calcified plaque modifying device before coronary stent implantation. Equipped with a diamond coated crown, it rotates over its guidewire in a centrifugal pattern, crushing the calcified plaque. Breakage of the device component accounts for 40% of the complications, entrapment of device occurs in 8% of cases, and breakage with subsequent entrapment of the device pieces represents 0.4% of its complications.

Conclusion Crown entrapment is a serious consequence of atherectomy that requires a suitable device for its retrieval.

APCU 40 DE WINTER SYNDROME: A RARE BUT FATAL ENTITY OFTEN MISSED

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Introduction The de Winter Syndrome is an electrocardiogram pattern that is highly suggestive of acute occlusion of left anterior descending artery (LAD). It often presents a diagnostic challenge due to its uncommon electrocardiogram pattern which may lead to a catastrophic complication such as cardiovascular mortality. Hence, we present a case of de Winter syndrome, in which angiogram confirmed an acute occlusion of left anterior descending artery.

Case Presentation A 41-year-old gentleman, active smoker with no known medical illness previously, presented to us with sudden onset central chest pain which occurred while resting. It was described as heaviness in nature and non-radiating, associated with giddiness and nausea during the event. His ECG showed upsloping ST segment depression at the J point at V2-V6 with peaked T wave. There is also a 1 mm ST elevation in lead aVR. Subsequent ECG in ED showed no evolvement into ST elevation pattern. His troponin level was raised. We diagnosed him as de Winter Syndrome and planned for primary percutaneous intervention (PCI). Unfortunately, we were unable to proceed with PCI due to service unavailability. Subsequently, ECG in the ward showed evolvement into Wellens pattern. Angiogram on day 5 of admission confirmed 90% occlusion of the mid LAD and a stent was successfully inserted into the mid LAD. Subsequently the patient was discharge well after cardiac rehabilitation in our cardiac care unit.

Discussion De Winter pattern accounts for about 2% of patient with LAD occlusion. The ECG patterns in de Winter syndrome are upsloping ST segment depression at the J point in lead V1–V6, peaked T waves and 1–2 mm ST elevation in lead aVR. A few theories proposed as underlying aetiology such as anatomical variant, existing collateral blood supply and lack of sarcolemma ATP-sensitive potassium (KATP) channels.