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Case in which the Scoreflex NC was Effective in a Right Coronary Artery Lesion with Circumferential Severe Calcification

CASE STUDY 1

Case Details

- 74-year-old female patient under medical treatment for hypertension and diabetes
- Chest discomfort during exertion and subsequently visited hospital
- Angiography showed a 75% stenosis at distal Right Coronary Artery (segment 3) [Fig.1] and catheter treatment was performed upon diagnosis of angina

Procedure

The procedure was conducted via transfemoral access and began with the engagement an AL1 guiding catheter at the ostium of the RCA. Upon successful lesion crossing with an Axel Floppy guidewire, IVUS imaging was used and revealed a diseased vessel with circumferential calcification [Fig.2]. Since the patient has chronic kidney disease (CKD), a Guidezilla II guiding catheter extension was used to help reduce the amount of contrast media consumption as well as for extra device backup. A 2.5 x 10 mm Scoreflex NC was then used to predilate the lesion at high-pressure [Fig.3], followed by post-IVUS which showed a dissection likely caused by the scoring effect of the NC device [Fig.4]. Upon measurement using IVUS, a 3.0 x 16 mm Synergy was placed and the procedure was completed with excellent final imaging [Fig. 5].

Fig. 1

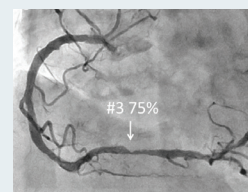


Fig. 2

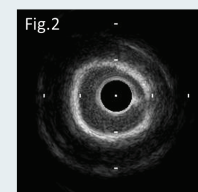


Fig. 3

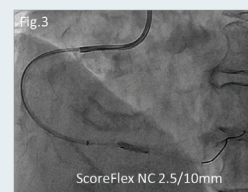


Fig. 4

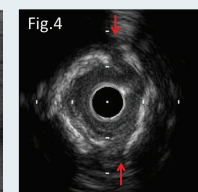
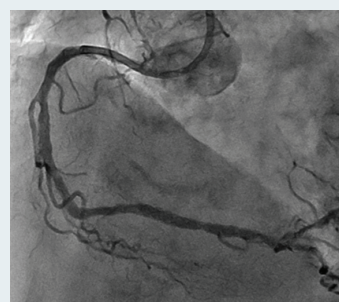


Fig. 5



Discussion

Stent under expansion is a commonly known cause of stent thrombosis and restenosis, therefore, lesion preparation by means of plaque modification is an important step. In this particular case, the minimal lumen diameter (MLD) of the lesion lies within the distal segment of a circumferentially calcified RCA. Furthermore, since the patient has chronically impaired kidney conditions, scoring device was preferred over the use of rotational atherectomy (rotablator) for easier delivery as well as reduced contrast injection.

Scoreflex NC, which is an improved version of the previous semi-compliant Scoreflex, facilitates excellent deliverability as well as the added benefit of high-pressure dilatation for more effective plaque modification and more even pressure distribution within the balloon especially under more calcific environment. During this case, the circumferential calcium cracks created via high-pressure balloon dilatation using Scoreflex NC were identified by IVUS and the case finished with excellent stent expansion and vessel apposition.