



High pressure post dilatation with weak back up support

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Introduction

52-year-old man was admitted to our hospital for inferior STEMI with the cardiogenic shock. The patient was without regular medical dispensation, smoker. On 24th April 2021 at 10.00pm he suddenly suffered severe chest pain with nausea and sweating. After several hours he came to the emergency department of local hospital. 12-lead ECG demonstrated sinus rhythm with 54 bpm and ST elevation in II, III, aVF. Physical examination revealed a blood pressure of 84/55mmHg. Thus, the diagnosis of inferior STEMI was stated after five hours of chest pain. The standard medication of acetylsalicylic acid, ticagrelor and unfractionated heparin was administered and the patient was accepted to urgent coronary catheterization. During transport, norepinephrine had to be added due to further decrease of blood pressure. At the admission to our cath lab the patient was conscious, spontaneously ventilating with oxygen saturation 96%, with blood pressure of 92/60mmHg.

Case report

As a radial artery was almost non-palpable, we preferred femoral approach using 6F sheath. Coronary angiography showed minimal atherosclerosis in left coronary artery. The ostium of right coronary artery (RCA) with 6F JR4 guiding was not found. Infusing a small amount of contrast to right coronary sinus we visualized RCA near the sinotubular junction running downward. Cannulation was successful by 6F AL1 guiding, however with weak backup support. The proximal segment of RCA was affected by atherosclerosis with an acute occlusion in the middle segment.

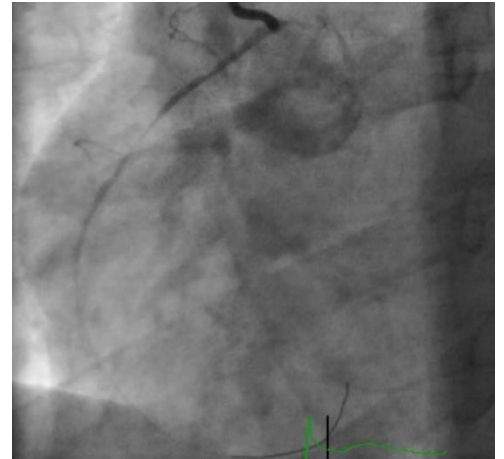


Fig.1

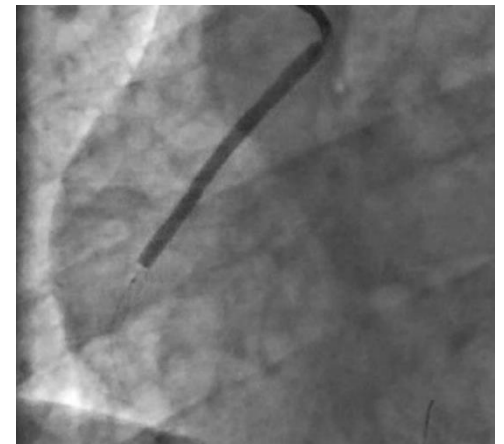


Fig.2

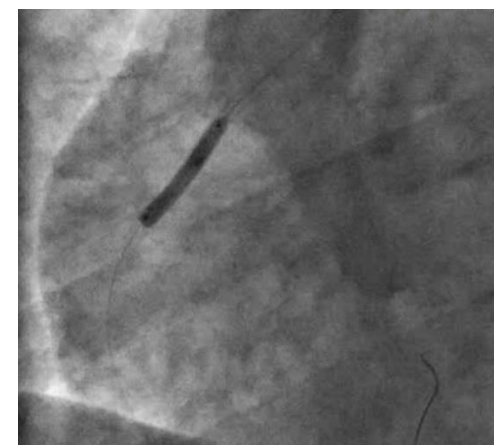


Fig.3



The occlusion was crossed with Asahi Sion wire with partial recanalization of RCA. After balloon predilatation of culprit lesion we tried to implant DES BioMime Morph 3.5-3.0/50mm.

But with insufficient guiding back up support it was problematic and we finally succeeded to insert stent by buddy wire technique using another Asahi Sion wire.

To optimize stent deployment, was the middle part of stent post-dilated using standard NC balloon 3.0x20mm inflated to 22-24atm. However, standard 3.5x20mm NC balloon did not cross to RCA. This time second Asahi Sion wire again inserted to RCA for guiding stabilization did not help. After changing NC balloon for ACROSS HP 3.5x20mm we were able to cross to RCA and post-dilate the proximal part of stent with high pressure. We finished with satisfying angiographic and clinical effect of PCI, norepinephrine could be stopped and the patient was placed to intensive care unit only with residual chest pain.

Conclusion

In this case we experienced good ACROSS HP balloon crossing for stent post-dilatation to atypically arising RCA with weak back up guiding support. We used its characteristics to behave as very-low compliant at high pressure.

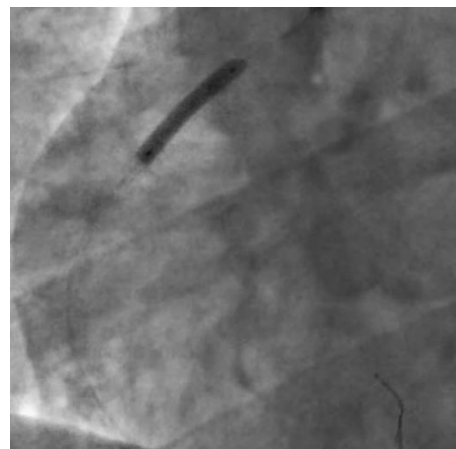


Fig.4

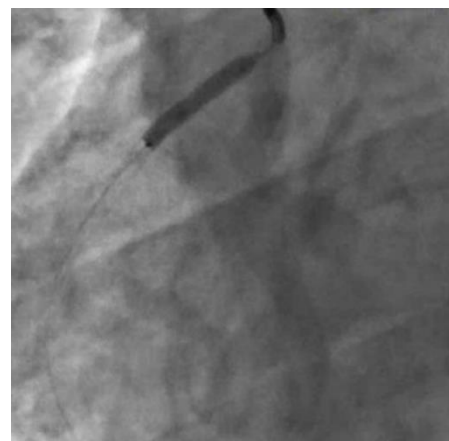


Fig.5

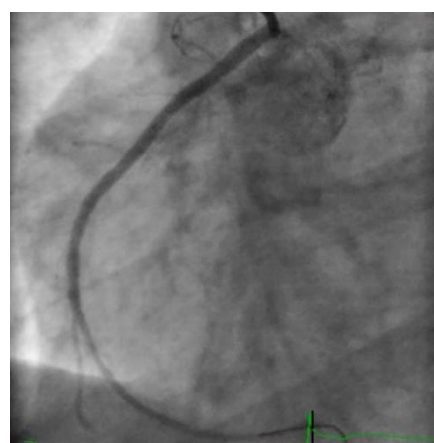


Fig.6

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