COMPLEX BIFURCATION LESION

AUTHOR

Dr. Alberto Rodrigues

CONSULTANT INTERVENTIONAL CARDIOLOGIST

Centro Hospitalar de Gaia/Espinho, Vila Nova Gaia, Portugal

INTRODUCTION

The treatment of a bifurcation l esion i s a challenge, particularly when the need of two stents is anticipated.

CASE REPORT

A 59 year old female, under treatment for breast cancer, complained with typical effort angina.

ECG was unremarkable and transthoracic echo showed normal left ventricular systolic function without regional motion abnormalities.

A MSCT scan was performed showing sub-occlusive bifurcation lesion in a large obtuse marginal branch (Fig. 1).

Invasive coronariography (Fig. 2) with a plan to angioplasty was performed.

A 7 Fr EBU 3,5 (Medtronic® Launcher) guide catheter was placed through the right femoral artery.

Two angioplasty guidewires (Asahi® Sion and Terumo® Runthrough) were placed in both branches of the obtuse marginal.

Predilation with a 2.5x15 mm SC balloon was performed directed to the superior side branch. No predilation was done to the inferior branch, avoiding possible dissection at the ostium.

A 3.0x19 mm Angiolite ® Sirolimus Eluting Stent (SES) was placed from the main to the superior (larger) branch. Post dilation with a 3.5 NC balloon was done proximally (POT). This resulted in significant ostial stenosis of the inferior branch (Fig. 3).

A new guide wire (Abbott® Whisper ES) was placed in this inferior side branch through the stent strut. After predilation of this stenosis with a 2.5 NC balloon (Fig. 4), another Angiolite® SES 2,5x19 mm was placed through the struts of the previous one – TAP (T and small Protusion) technique (Fig. 5).

Final kissing balloon (Fig. 6) was performed using a 3.5x15 mm NC balloon and the 2.5x19 mm stent balloon.

A very nice final angiographic result was accomplished (Fig. 7). After 6 months the patient is asymptomatic and reports no events.

CONCLUSION AND FINAL REMARKS

This case illustrates the importance of the stent platform concerning the capability of post-dilation for good apposition along different vessel diameters; the cell design providing good side branch access; and the navigability and crossing ability through an angulated segment across the struts of another stent. These characteristics were of paramount importance during the performance of this angioplasty and provided a major contribution for a very good final result.

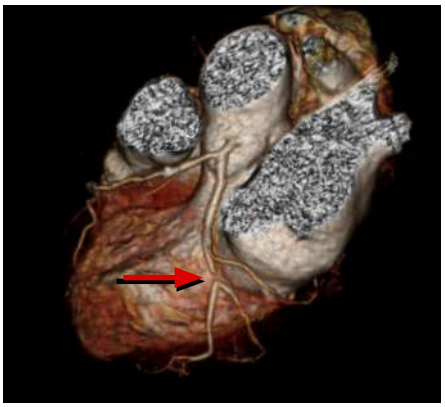

Fig. 1

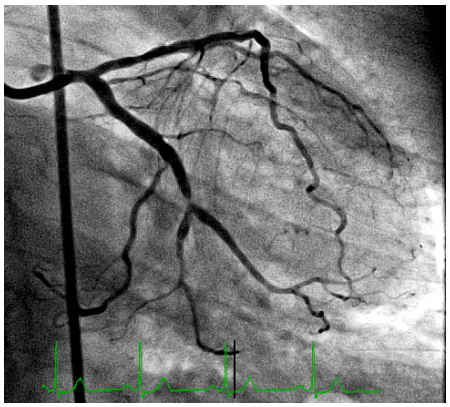

Fig. 2

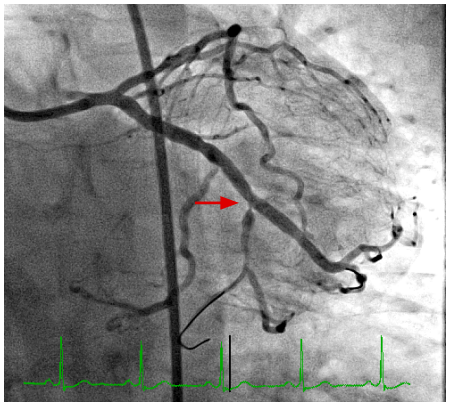

Fig. 3. Severe ostial side branch stenosis following first stent deployment.

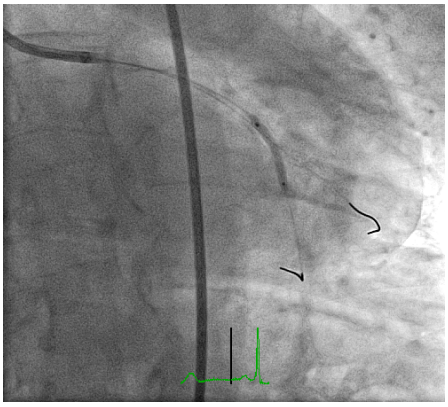

Fig. 4. Dilatation of the inferior branch opening the main stent struts with a 2,5 mm balloon.

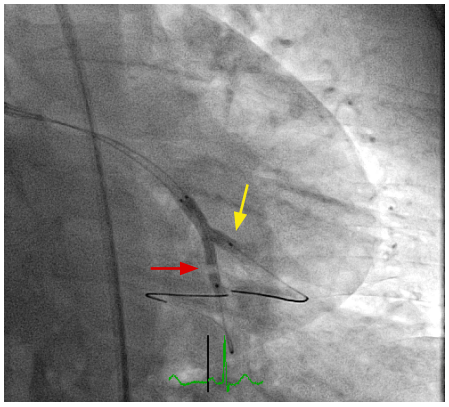

Fig. 6. Final 'Kissing balloon' with the stent balloon (red arrow) and the 3,5 NC balloon (yellow arrow).

Fig. 5. TAP technique: A 2,5x19 mm Angiolite® SES is placed in the side (inferior) branch protruding slightly into the main branch through the main stent struts; simultaneously a 3,5x15 NC balloon is placed inside the previously placed stent of the main branch.

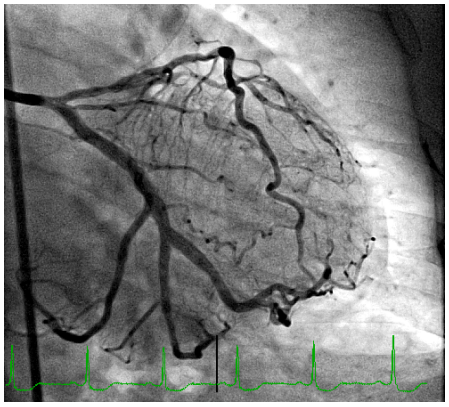

Fig. 7. Final angiography.

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