‘Hangover’ after side-branch stenting

The discomfort comes afterwards

R.H.J.A. Volleberg, MD. PhD candidate
S.C.H. van den Oord, MD, PhD. Fellow interventional cardiology
R.J.M. van Geuns, MD, PhD. Interventional cardiologist
Radboudumc Nijmegen, the Netherlands
• There are no conflicts of interest to be declared.

• Speaker: R.H.J.A. Volleberg
47 year old female

- Cardiovascular history: 2018 instable angina requiring 2x DES D1; left anterior descending mid 50%, FFR negative.
- Recurrent angina at rest and on exertion
- Fatigue
- No risk factors for cardiovascular disease
- Diltiazem 80mg once daily, isosorbidmononitrate 50mg once daily
- Referred for second opinion; recurrent angina caused by microvascular dysfunction or coronary artery spasm?
Coronary angiography

Acetylcholine

Nitrogen
• Diffuse epicardial spasms cause angina at rest
• Exertional angina is caused by functional lesion in left anterior descending artery
• Plan: OCT-guided PCI to assess underlying mechanism of obstruction
OCT imaging

Stenosis of main branch distal to side branch

Carina shift towards main branch

Stent protrusion into the main branch

DISTAL

A B C

PROXIMAL

MB main branch
SB side branch
PCI of the left anterior descending artery

Radial access, .035” guidewire

Positioning over target lesion

DES (3.0x38) implantation, 16 atm

In the meantime

Intermediate result

Postdilatation 20 atm

Postdilatation 20 atm
After PCI
• Full functional testing (FFR, acetylcholine, coronary microvascular resistance) identified two mechanism for angina in this patient

• OCT is valuable for detecting stent protrusion as the underlying mechanism for obstructive coronary artery disease

• Carina shift and neo-intima bridging may compromise the main branch in case of stent protrusion

• After side branch stenting, stent protrusion into the main branch is not to be neglected