

Very late Absorb BVS thrombosis

Chan Koo Hui

National University Heart Centre


Singapore

Research

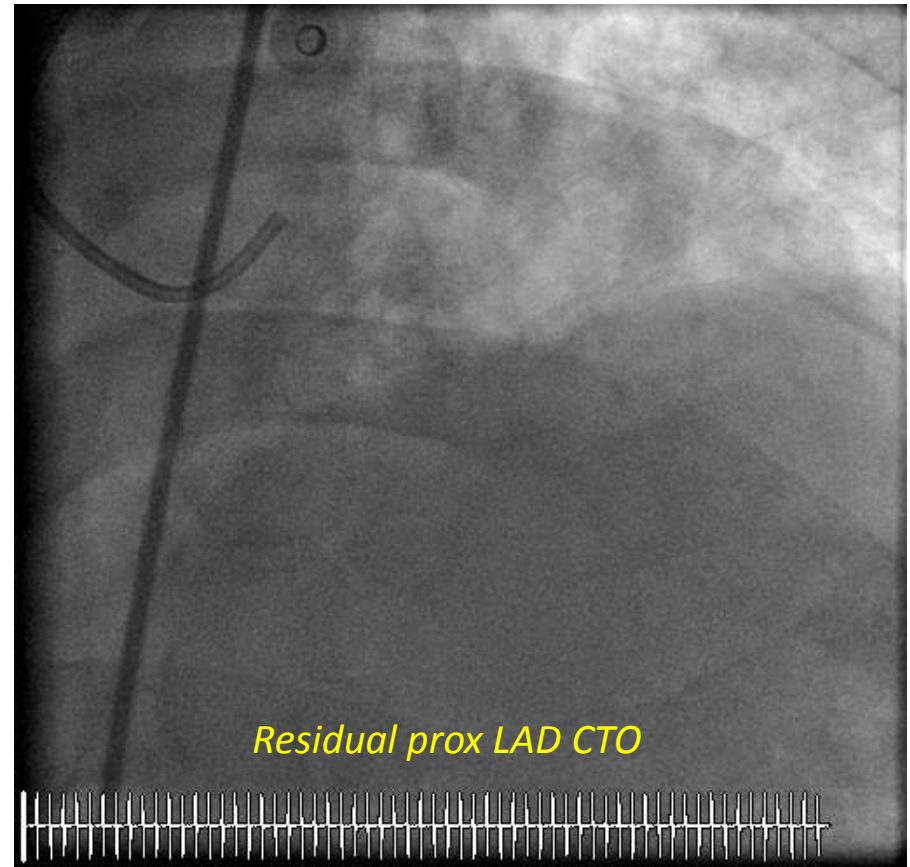
Clinical Care

Education

50 yr old male

- No PMH of note
 - Acute inferior STEMI 24th January 2013
 - PPCI of mid RCA: 3.5x28mm Omega stent (BMS)
 - Concomitant prox LAD CTO
 - LVEF post MI = 40% with hypokinetic anterior and akinetic posterior wall segments
 - Discharged on aspirin, prasugrel, simvastatin, carvedilol and lisinopril
 - Staged PCI of LAD CTO 25th Feb 2013
- 

Primary PCI of mid RCA Jan 2013



Staged PCI of prox LAD CTO Feb 2013

Predilated with 2x20mm Tazuna SC balloon

A fluoroscopic image showing a catheter and a small balloon (2x20mm Tazuna SC) positioned in a coronary artery. The balloon is inflated, and the surrounding vessel structure is visible.

Absorb BVS 2.5x28mm


A fluoroscopic image showing a catheter and a larger balloon (Absorb BVS 2.5x28mm) positioned in a coronary artery. The balloon is inflated, and the surrounding vessel structure is visible.

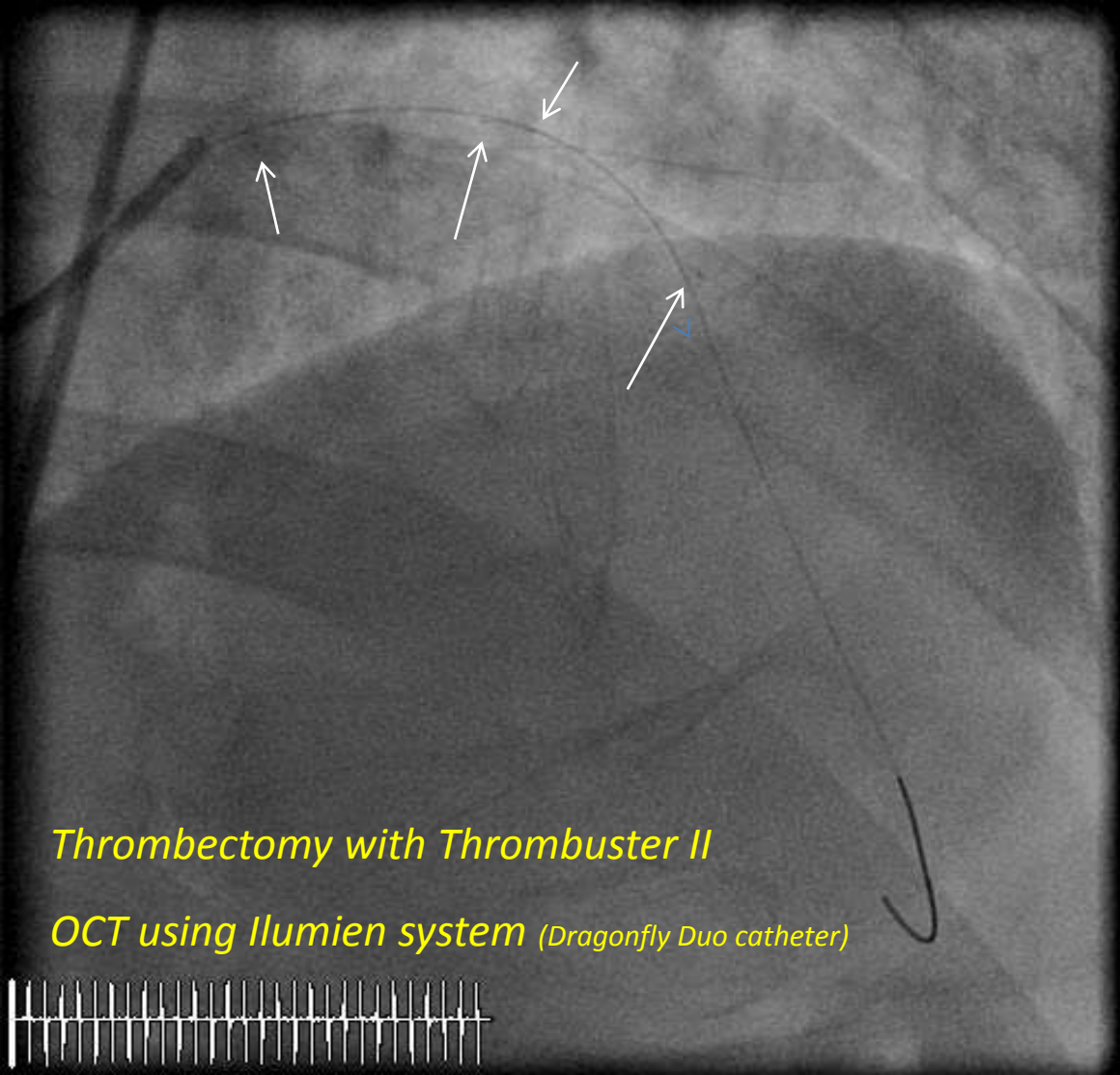
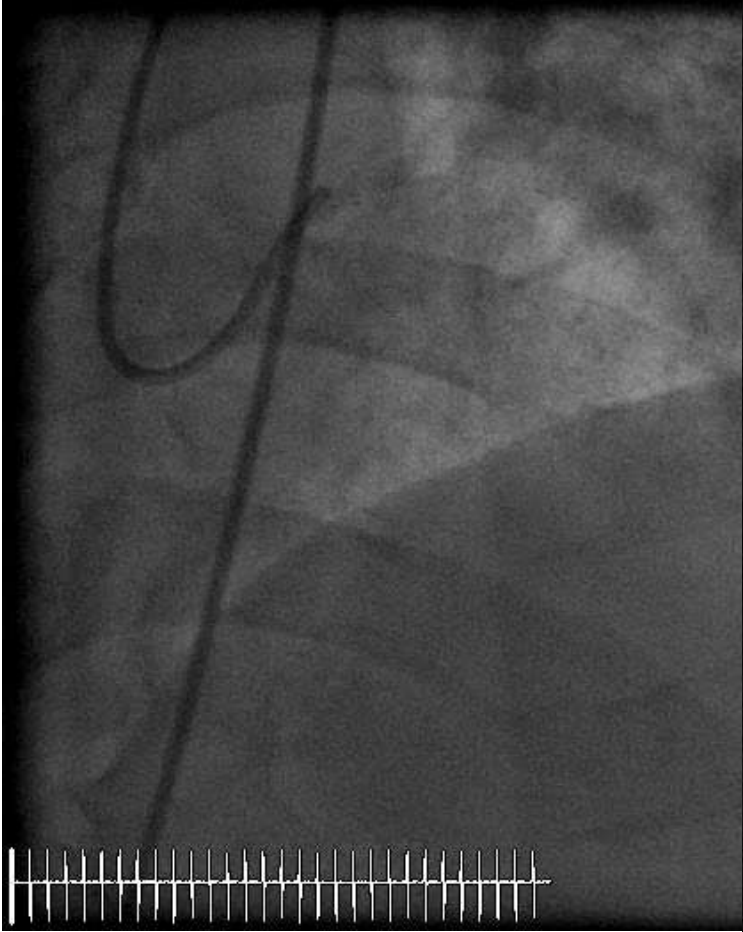
Postdilated both scaffolds with 3x28mm scaffold balloon x2 up to 16atm

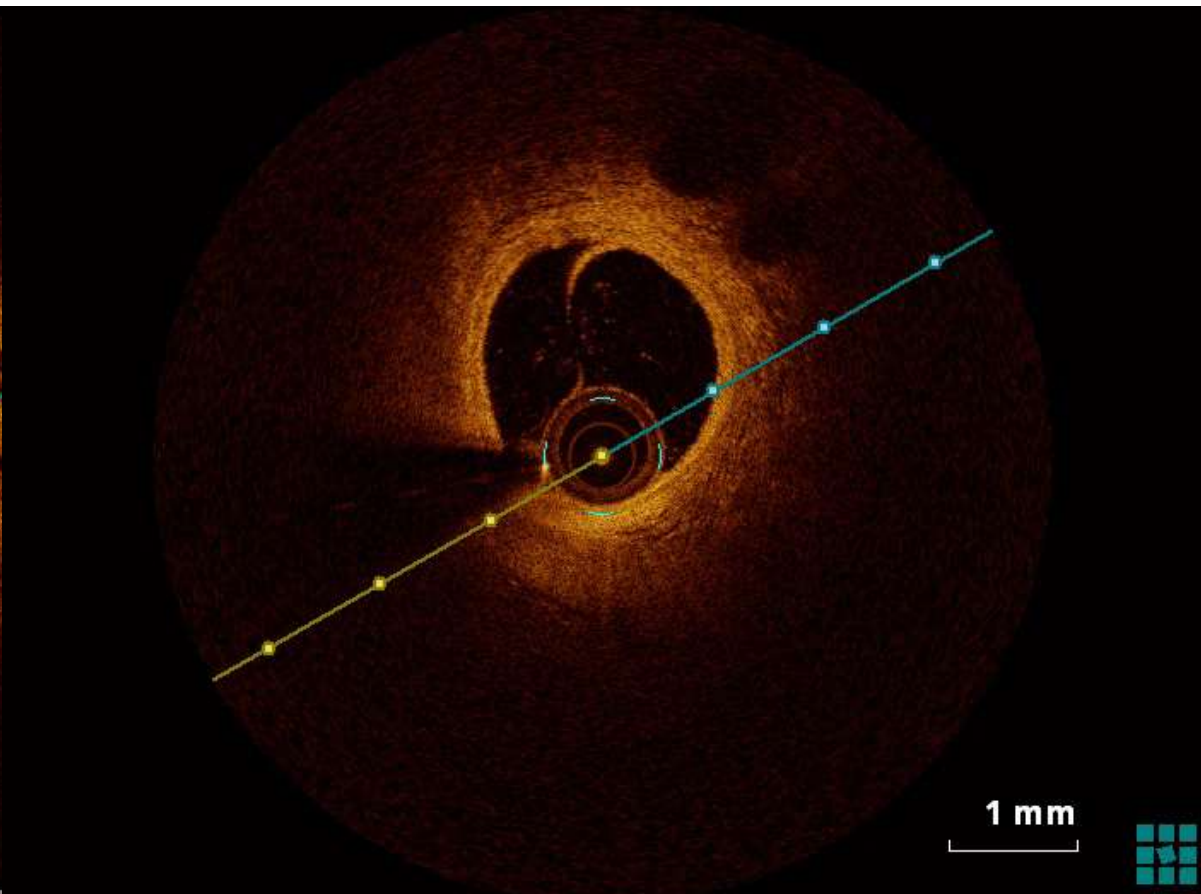
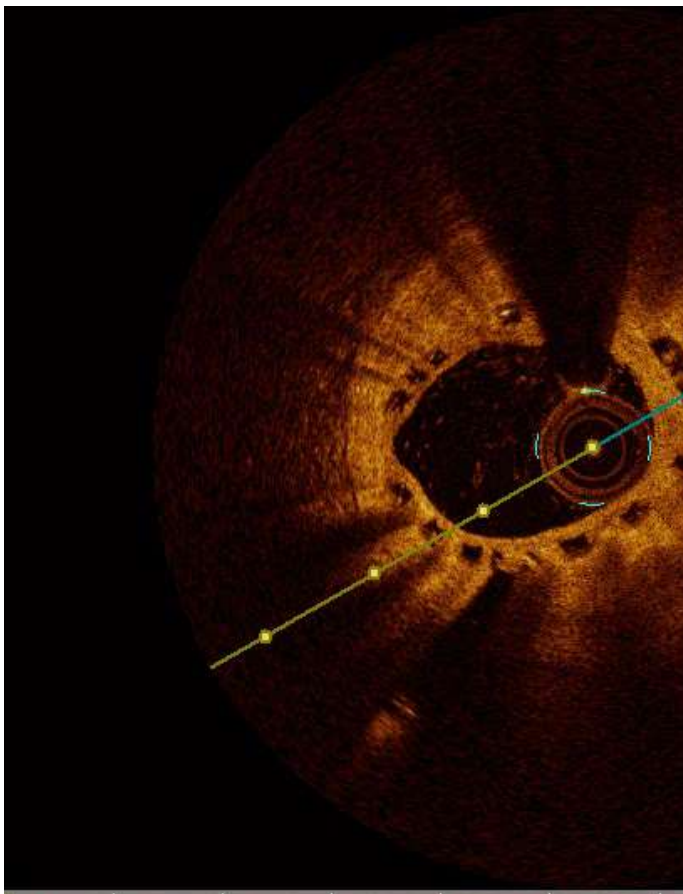
A fluoroscopic image showing a catheter and a scaffold balloon (3x28mm) positioned in a coronary artery. The balloon is inflated, and the surrounding vessel structure is visible.

Absorb BVS 3x28mm

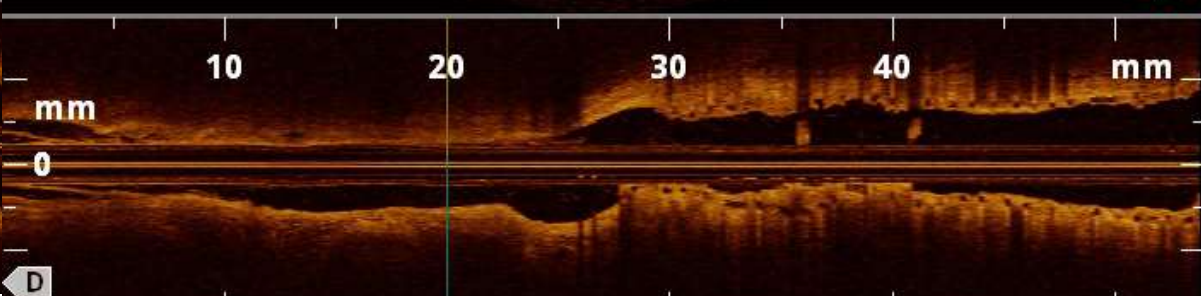
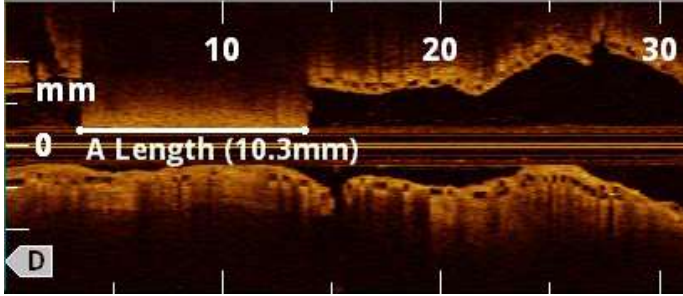


- Asymptomatic during follow-up
 - Prasugrel stopped March 2014; continued on aspirin long term
 - Discharged back to primary care July 2014
 - 2nd March 2015 (25 months after LAD PCI)
 - developed central chest pain after cycling for 30 mins
 - No acute ECG changes, old inferior TWI, peak troponin I 8.06 ug/L
 - Treated as NSTEMI, DAPT re-started: ticagrelor + aspirin
 - Coronary angiogram the following day
- 

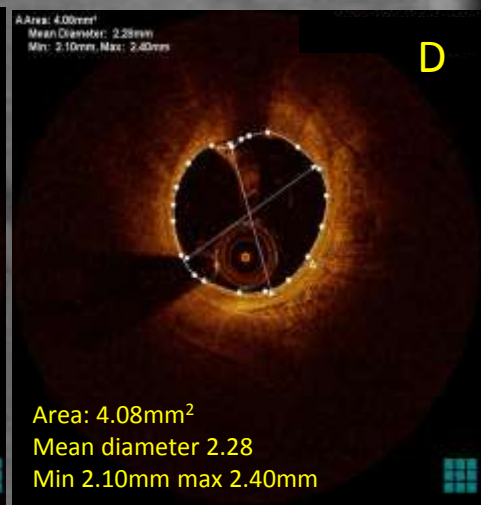
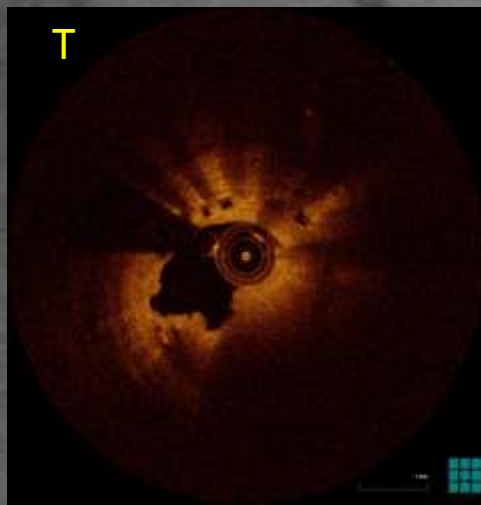
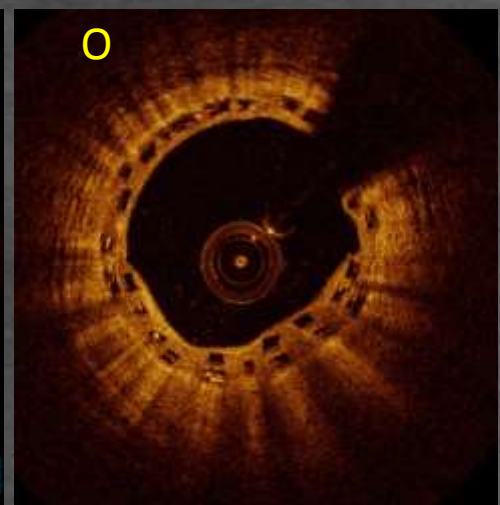
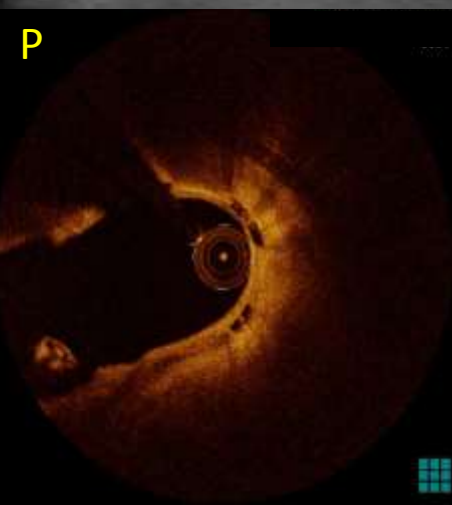
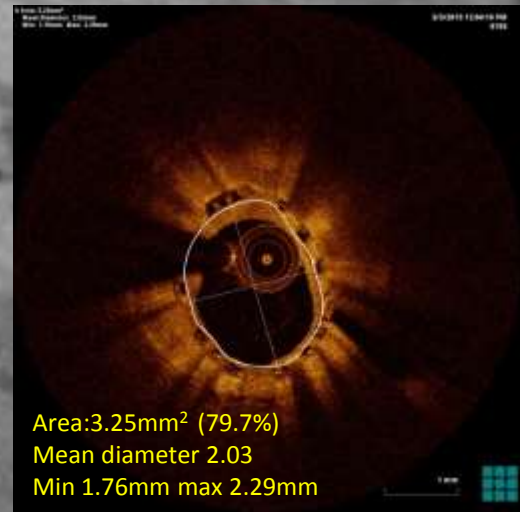
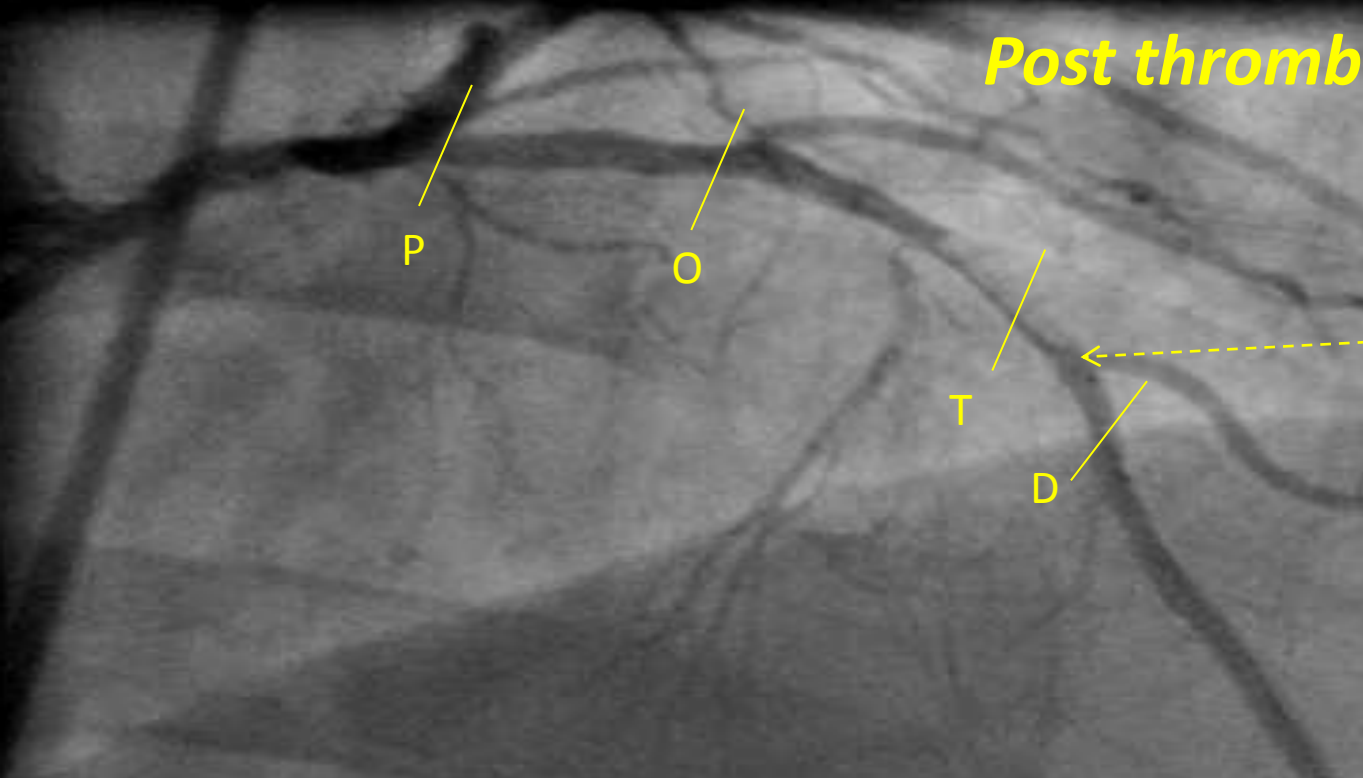


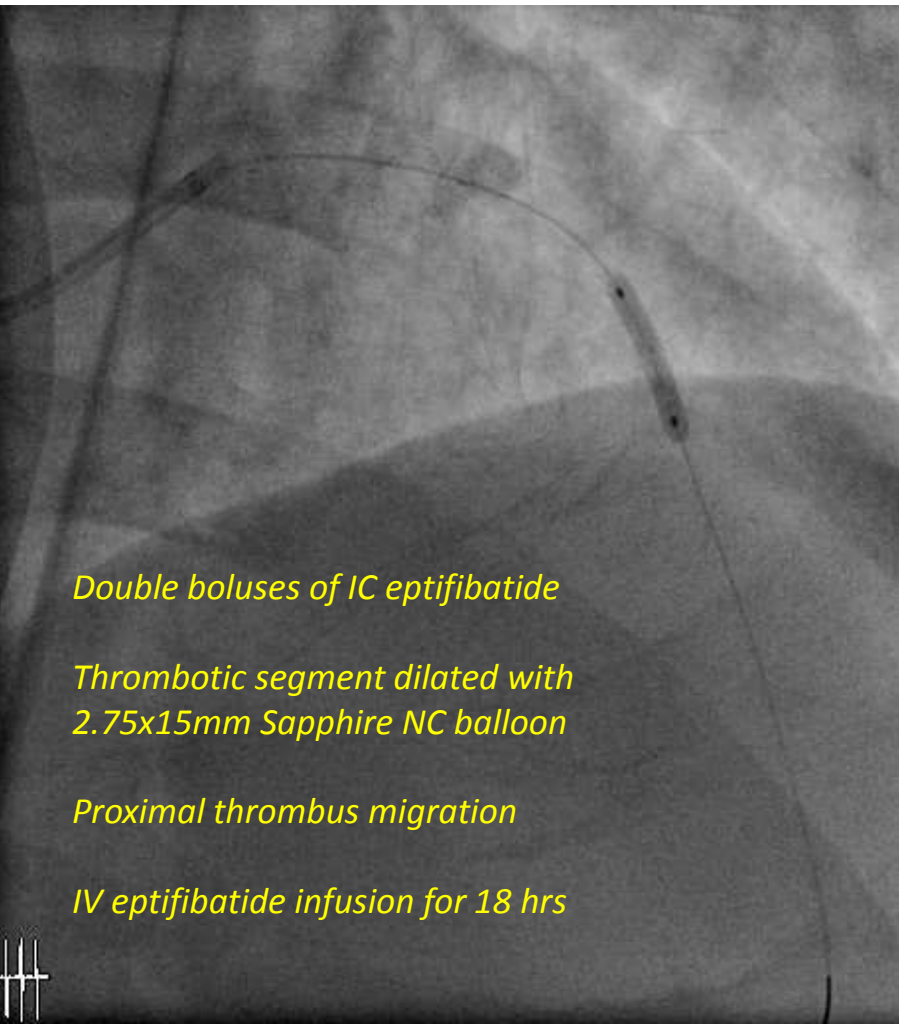


1 mm



Post thrombectomy



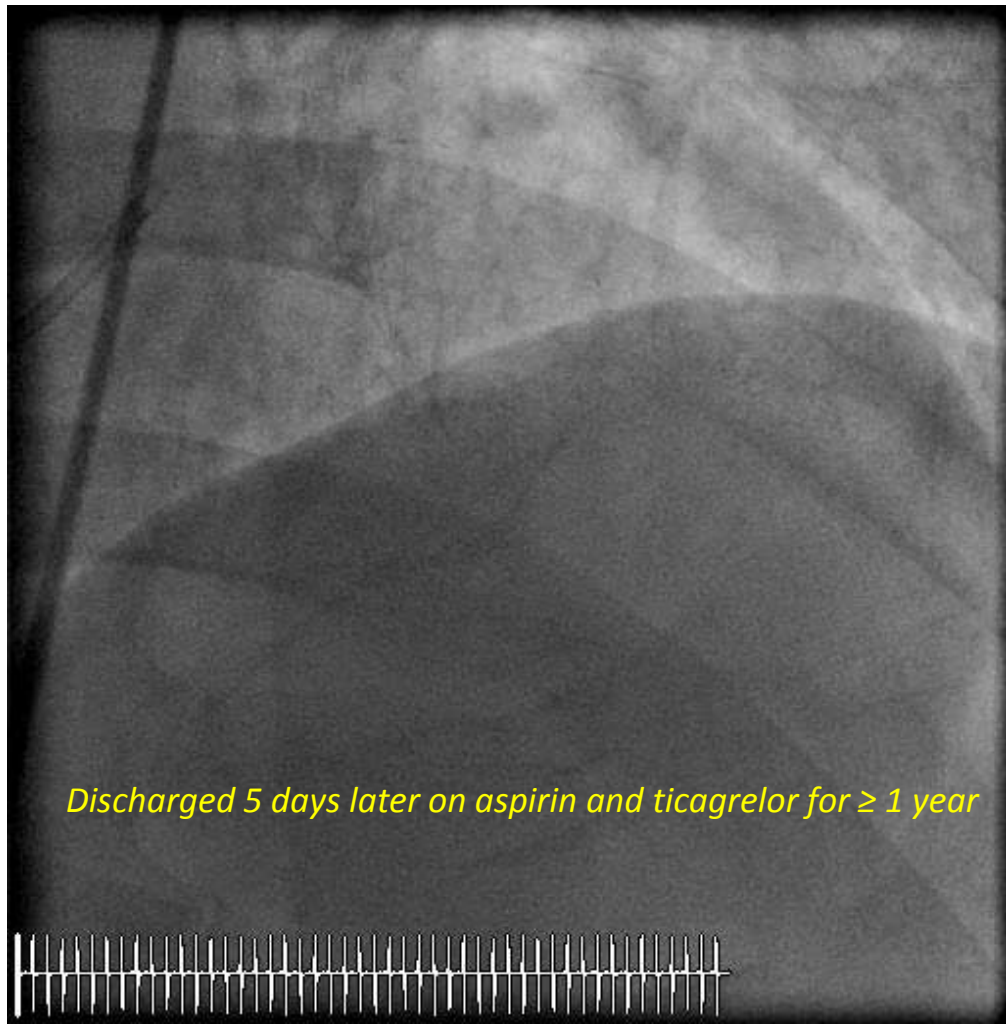


Double boluses of IC eptifibatide

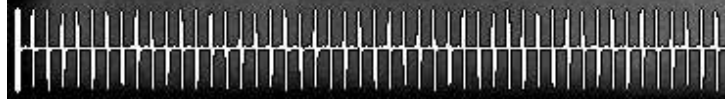
*Thrombotic segment dilated with
2.75x15mm Sapphire NC balloon*

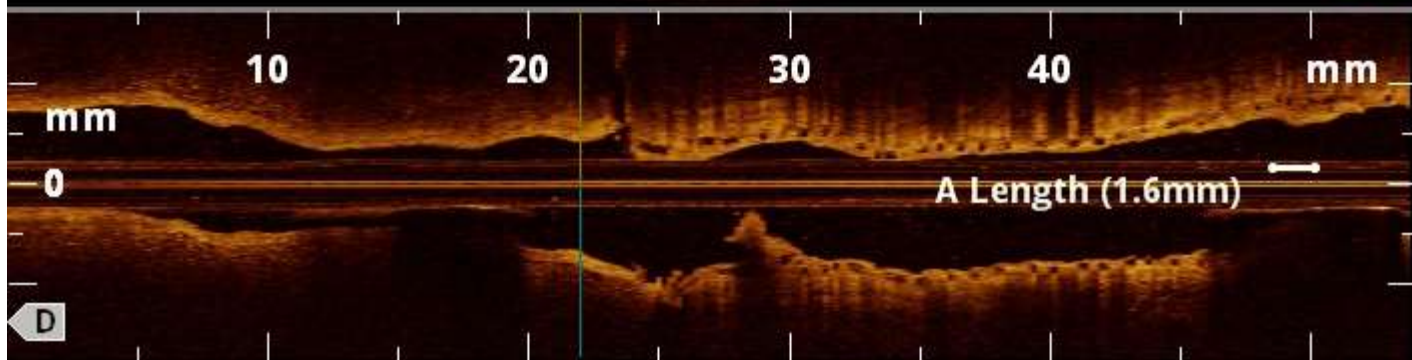
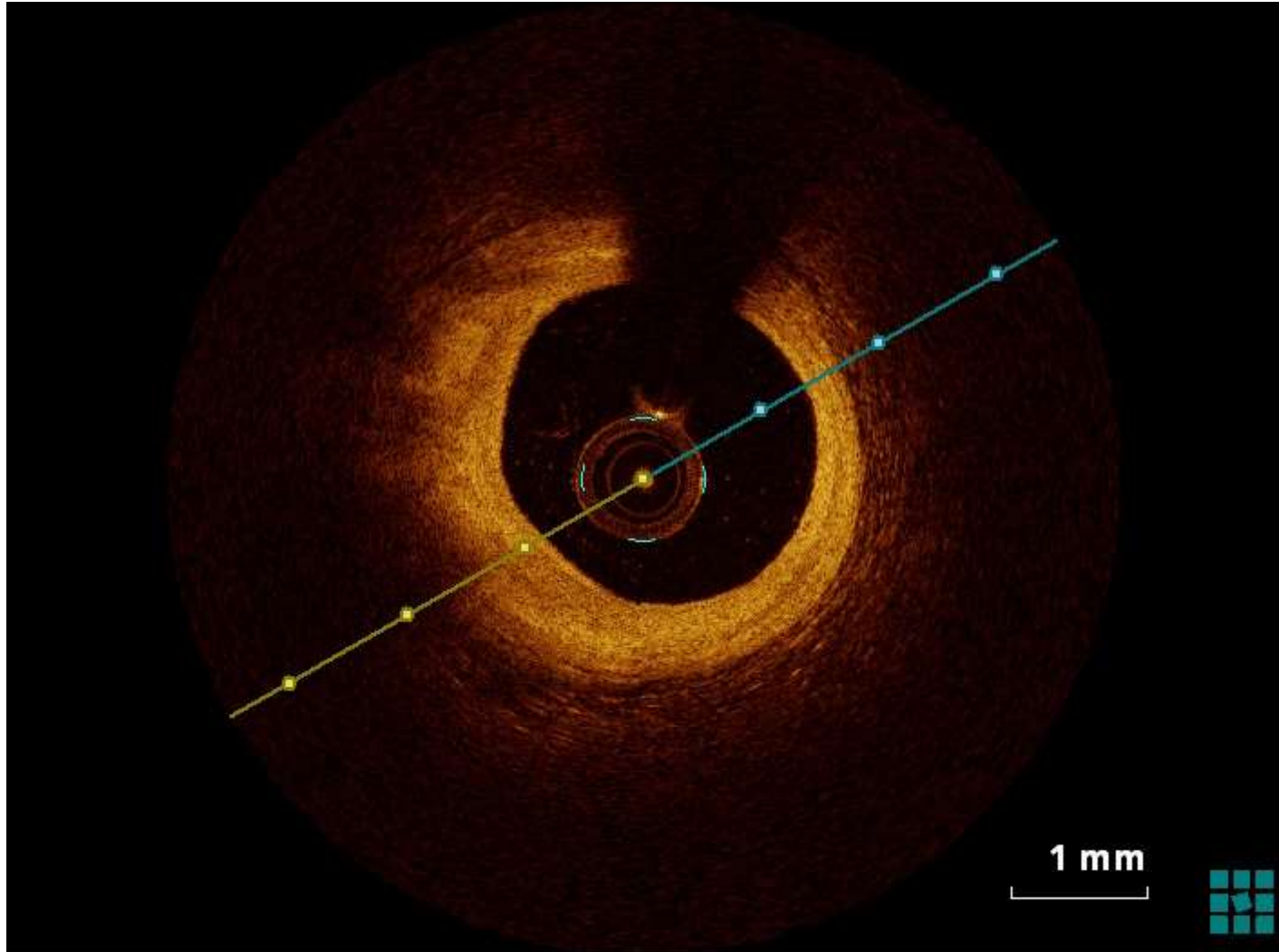
Proximal thrombus migration

IV eptifibatide infusion for 18 hrs



Discharged 5 days later on aspirin and ticagrelor for ≥ 1 year

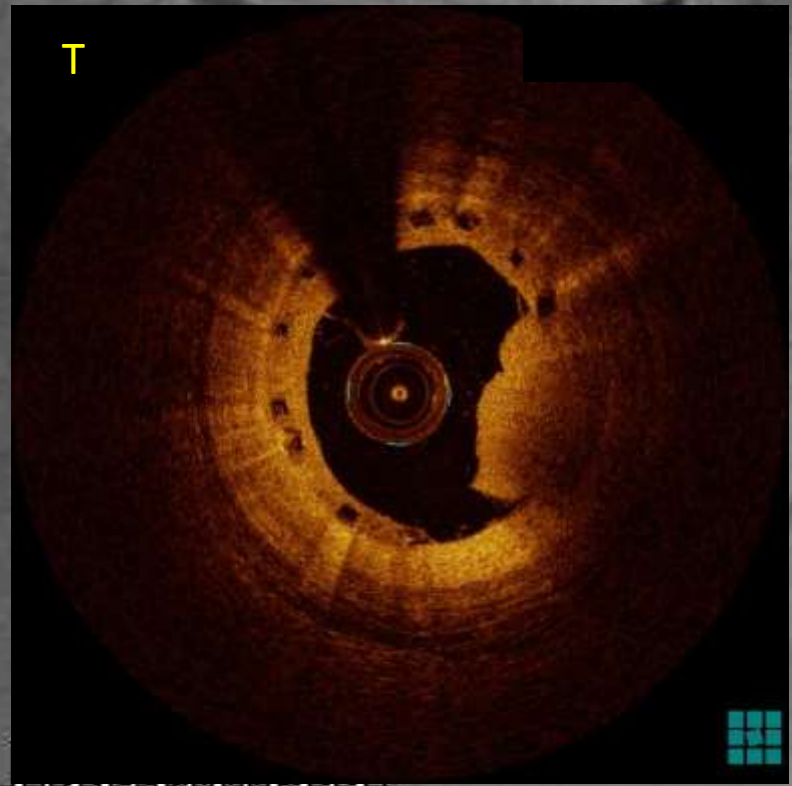
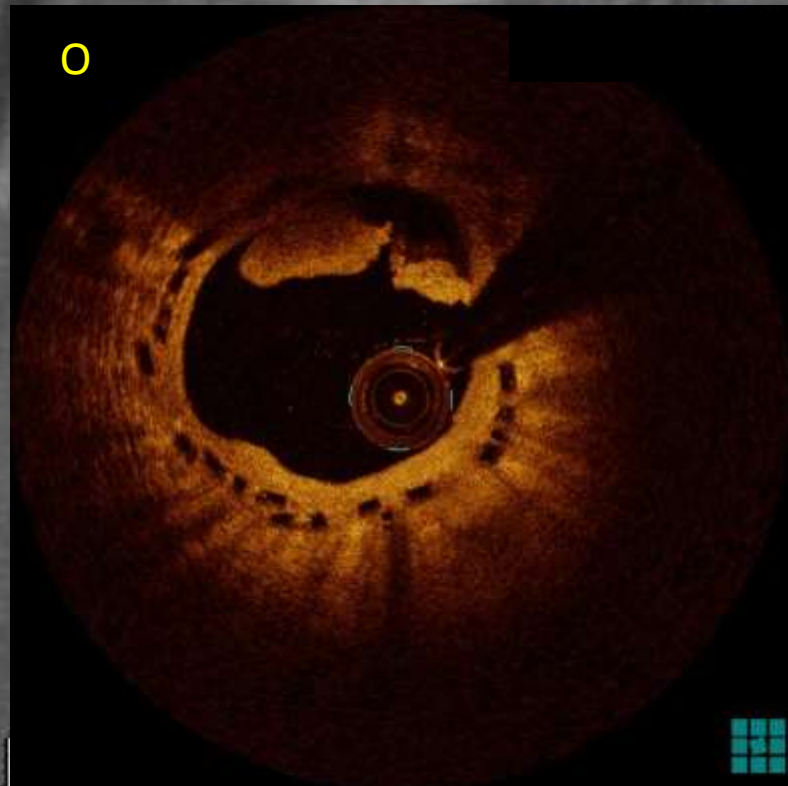




Post PTCA
Residual thrombus

O

T



Pathological mechanisms of late and very late scaffold thrombosis

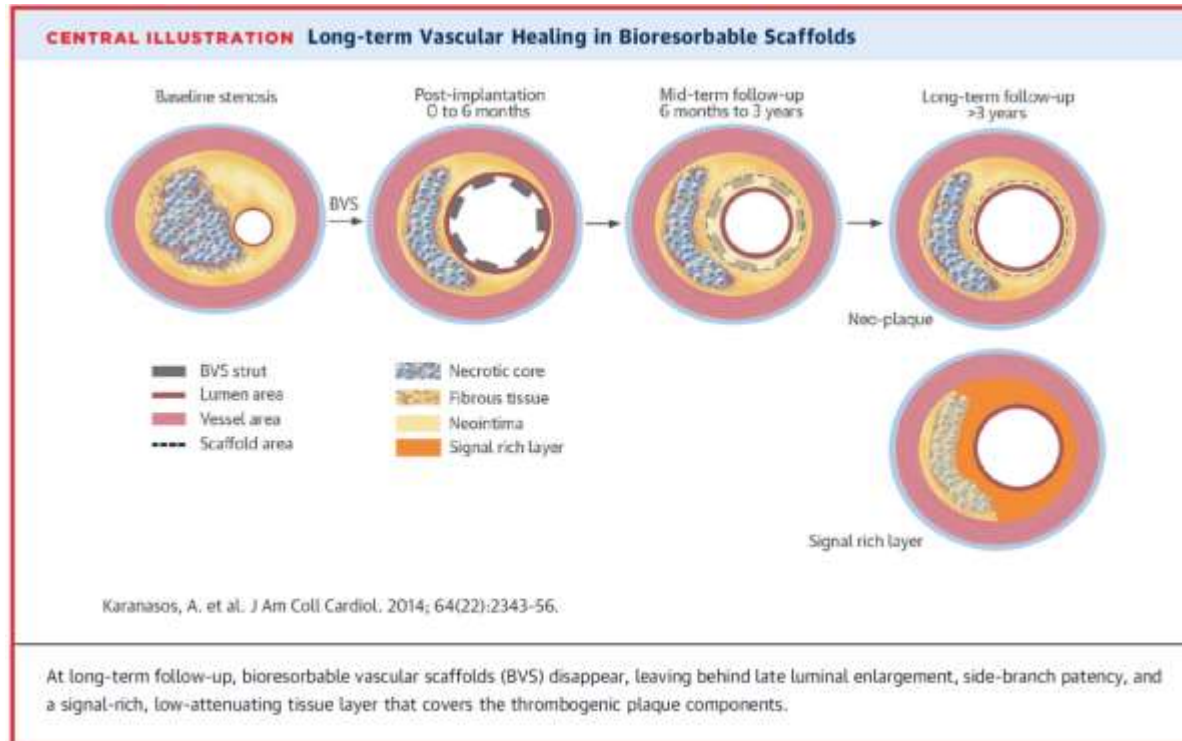
B-SEARCH registry: Karanosos / Regar et al *Circ Cardiovasc Interv* 2015
Thoraxcenter, Rotterdam, September 2012-June 2014

733 patients received Absorb BVS

14 cases (1.9%) of definite scaffold thrombosis, 6 acute/subacute, 5 late and 3 very late

- **mechanical substrate and trigger (DAPT discontinuation)**

Regional suboptimal flow conditions: underexpansion, strut protrusion / malapposition, strut discontinuity, bifurcation intervention



Very Late Thrombosis in Case Reports



- In the current case, the cause for the very late scaffold thrombosis is not so apparent, ? a slight underexpansion of distal scaffold edge

Thank you
for your attention