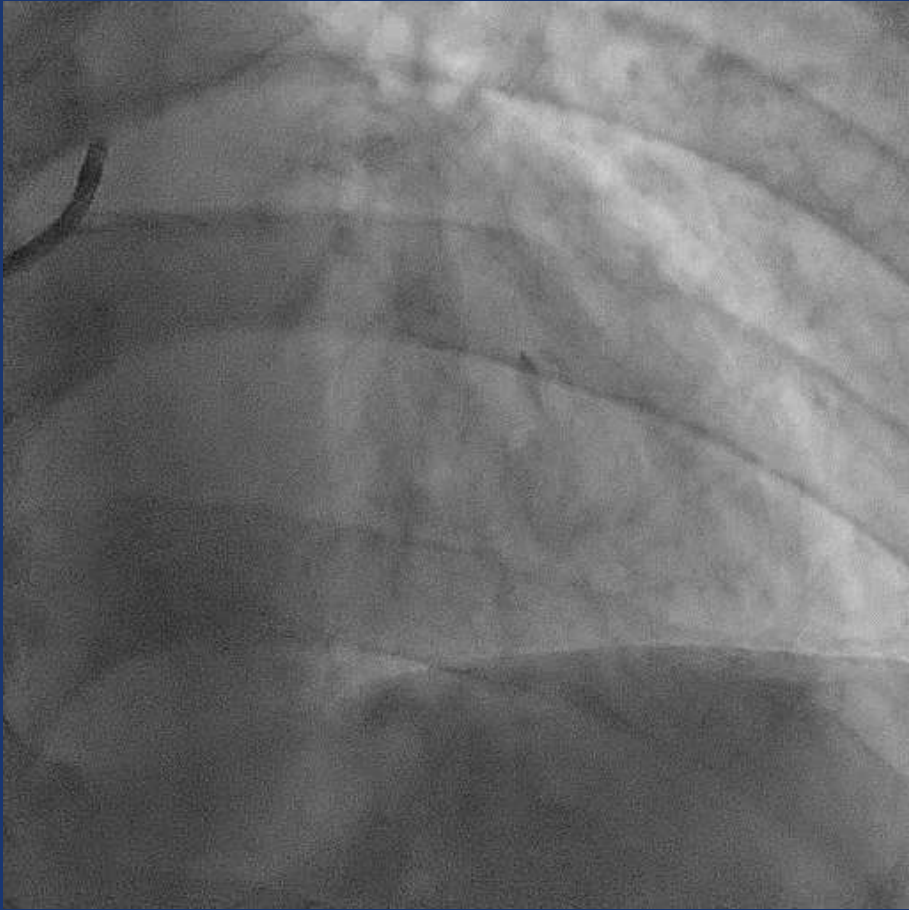


Contrast does not flow after stenting/debulking

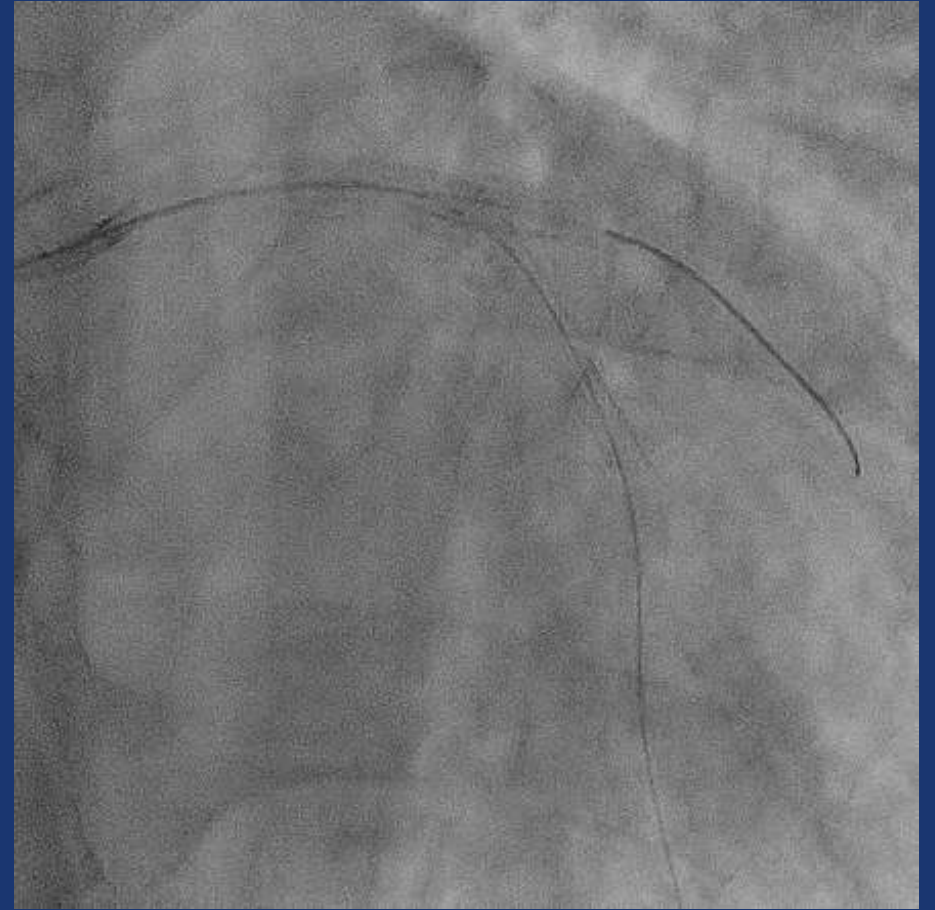
Toru Naganuma

New Tokyo Hospital, Japan

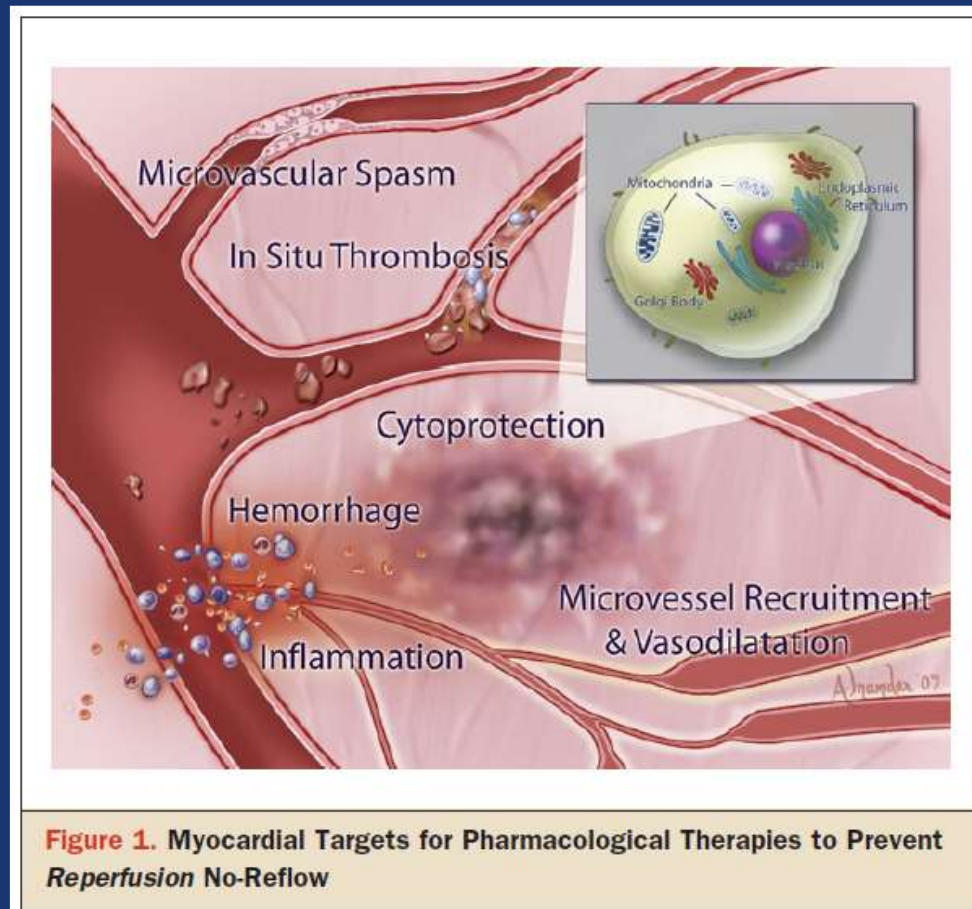
No flow, nightmare!!



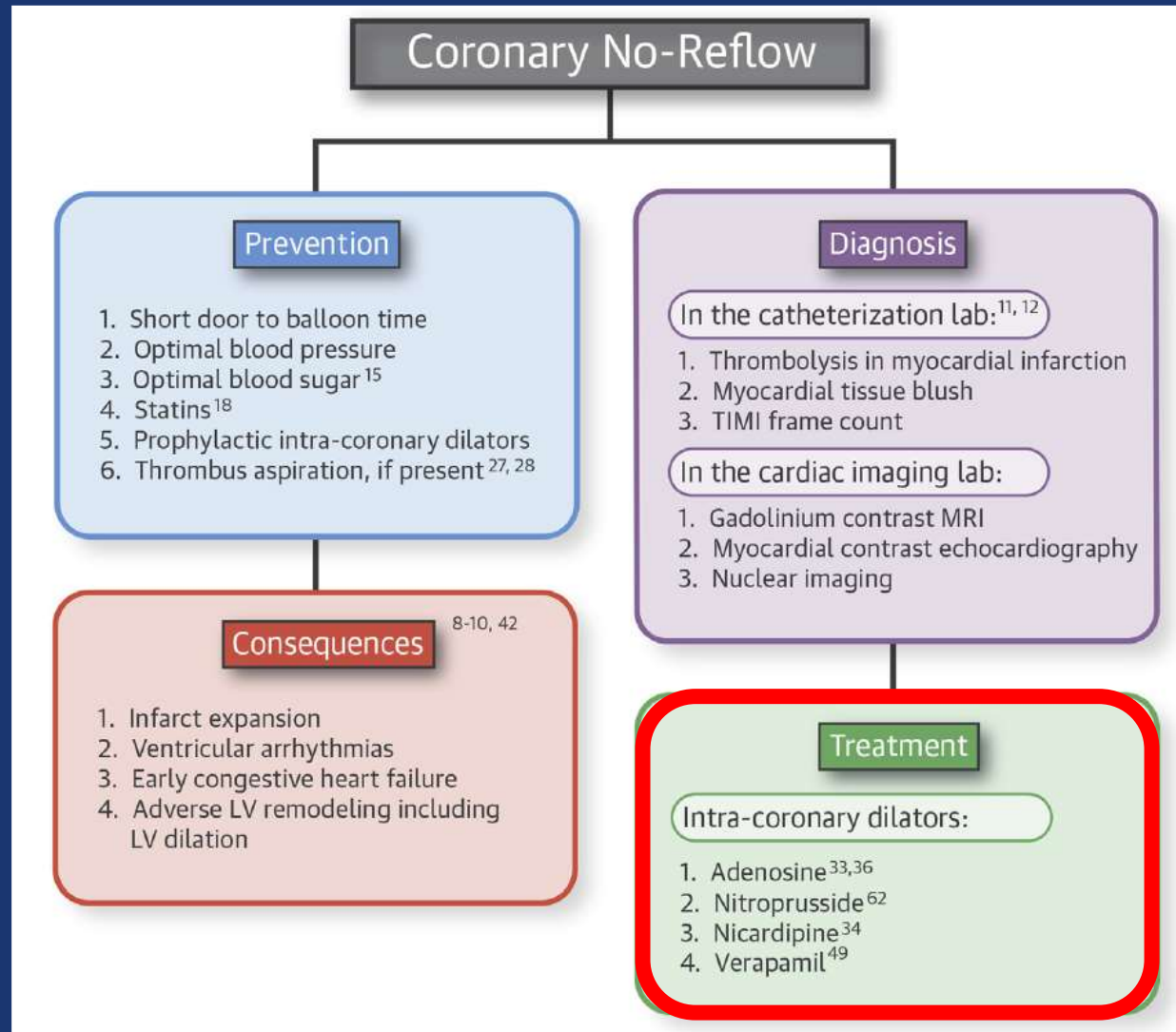
- Reverse Culotte on LAD/diagonal
- KBI



No/slow flow



No/slow flow



Nitroprusside

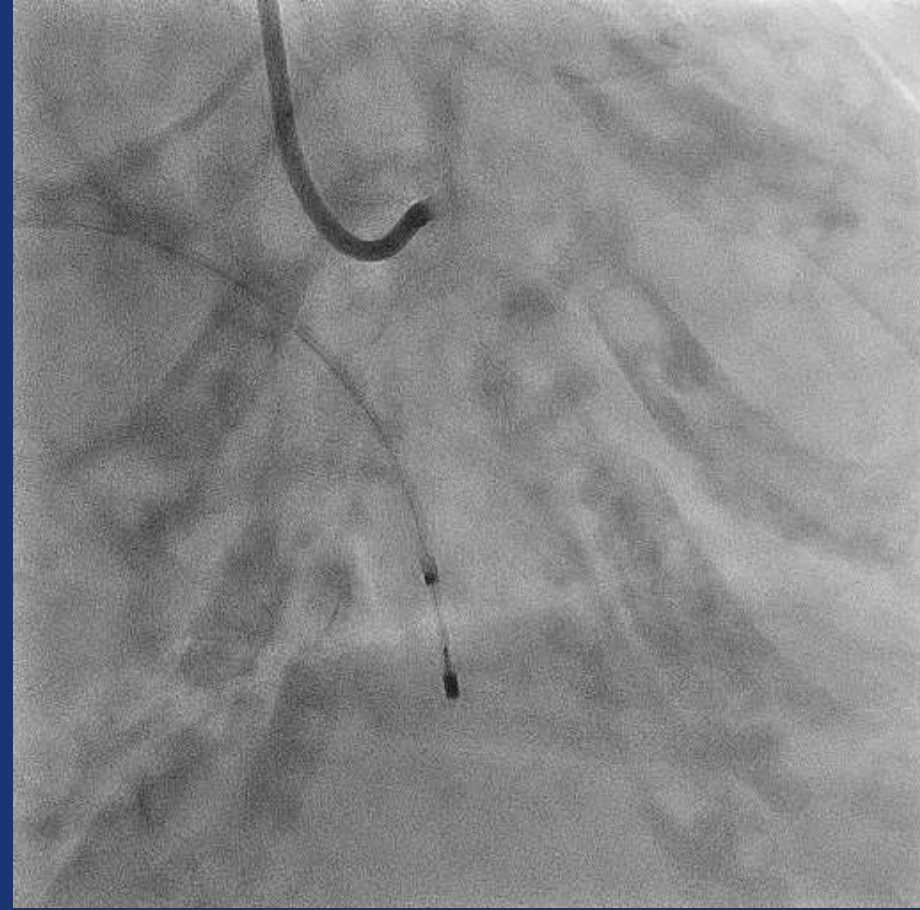
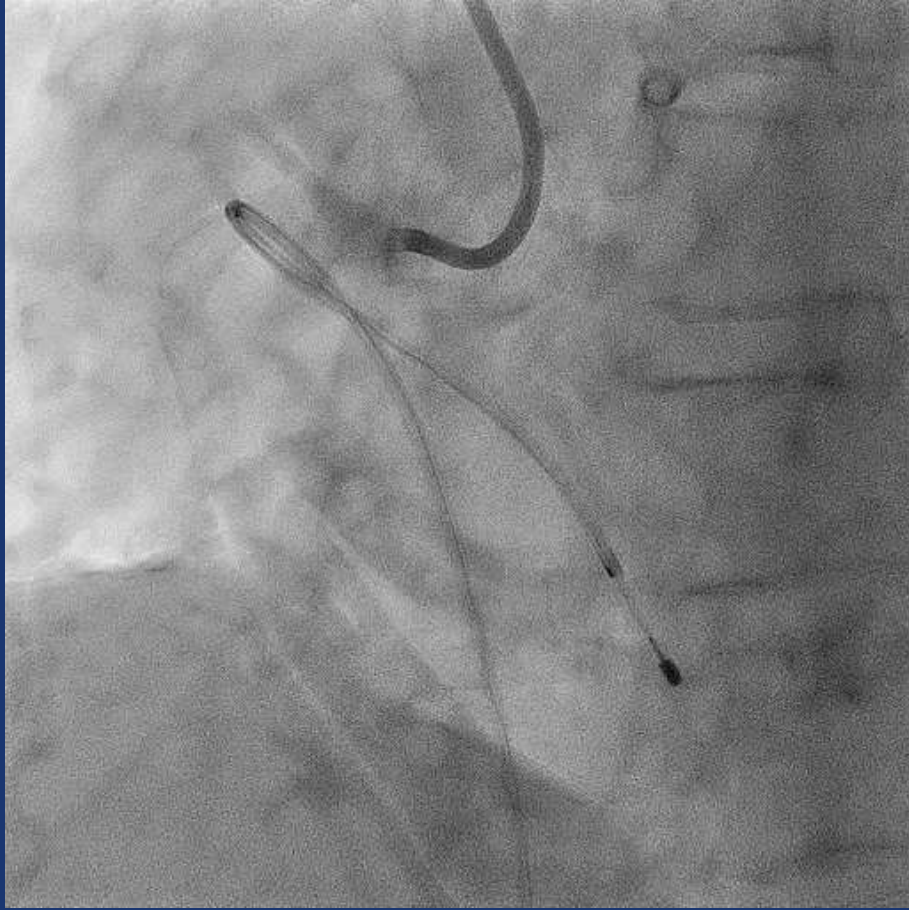


* 1A = 6mg = 2ml
+
118ml saline

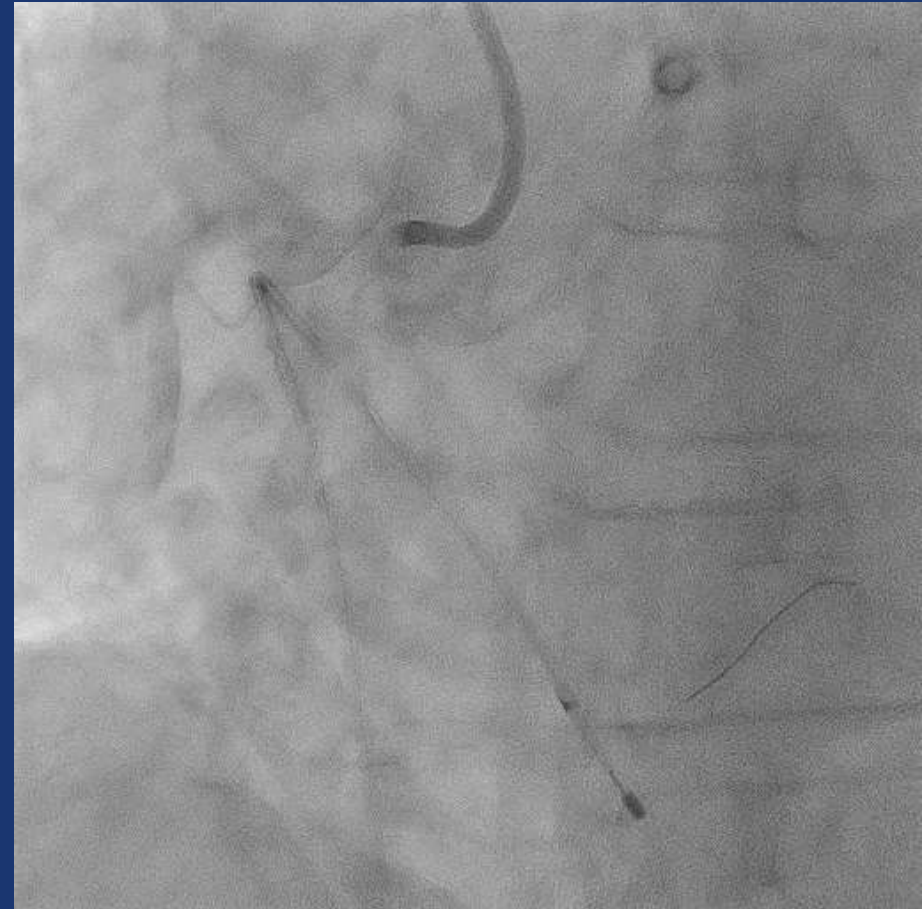
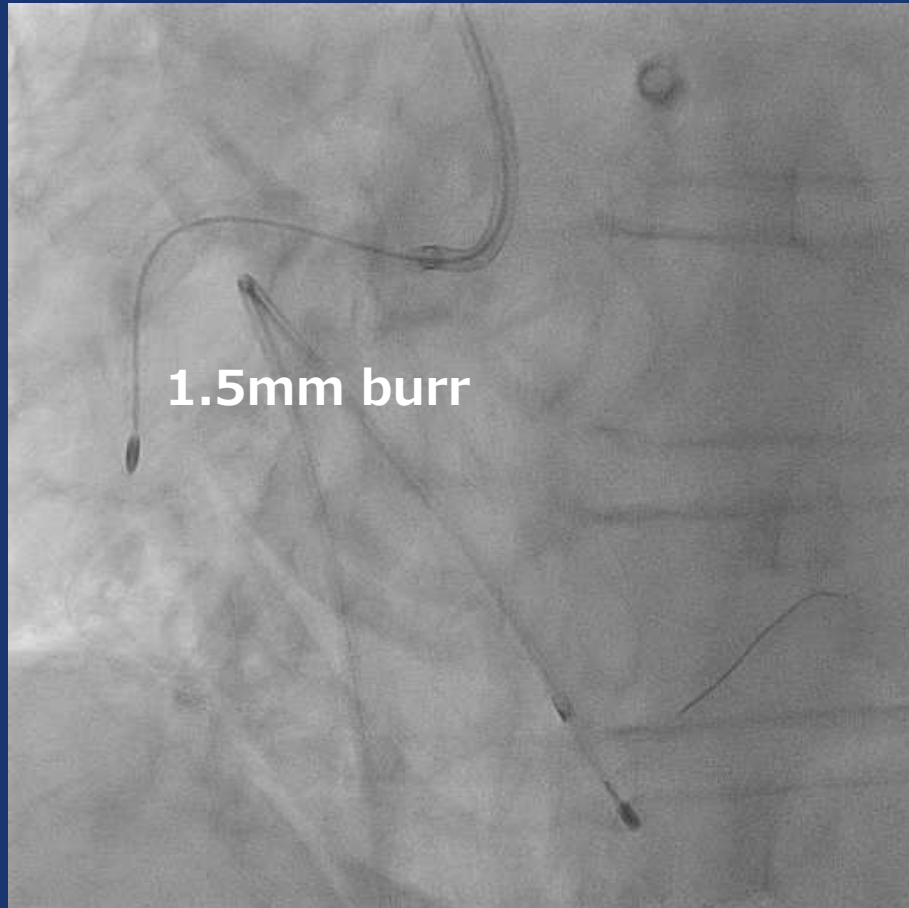
* 50 μ g = 1ml

Activate guanylate cyclase in the vascular smooth muscles leading to intense vasodilation

Heavy calc. on RCA

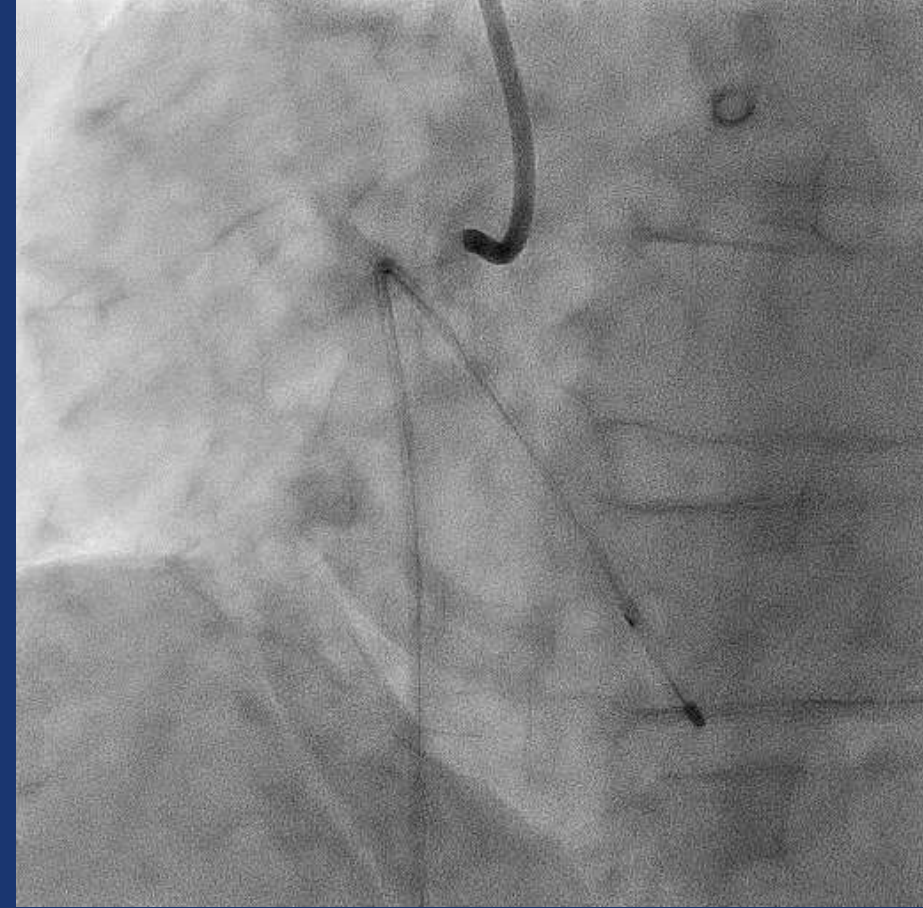


No flow after rotational atherectomy



Our RA cocktail includes Verapamil + Isosorbide

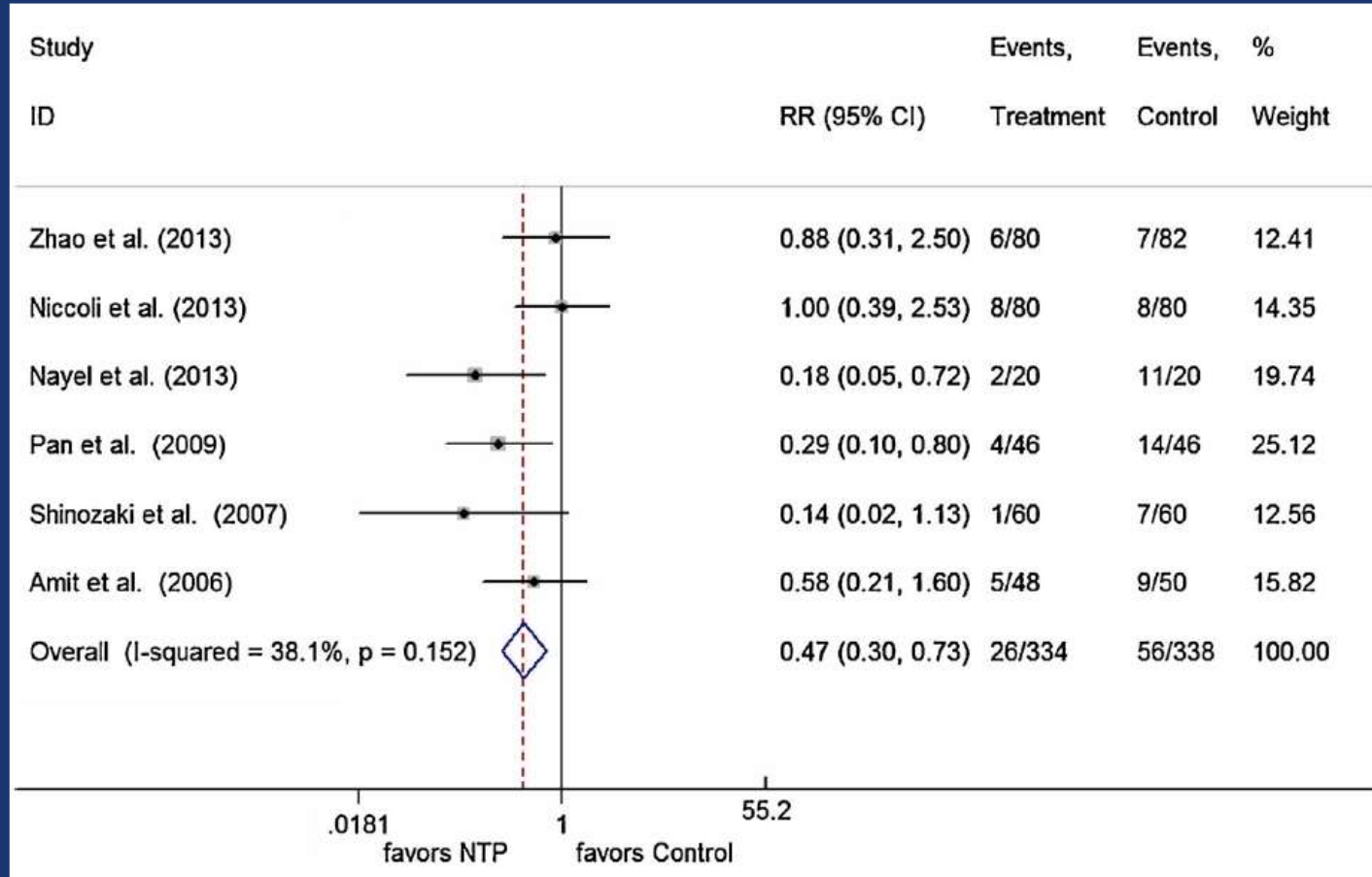
Intracoronary nitroprusside



Nitroprusside through a microcatheter

COMPLEX PCI 2021

TIMI flow grade ≤ 2



Control

Thrombus aspiration + Tirofiban

Thrombus aspiration + saline

No treatment

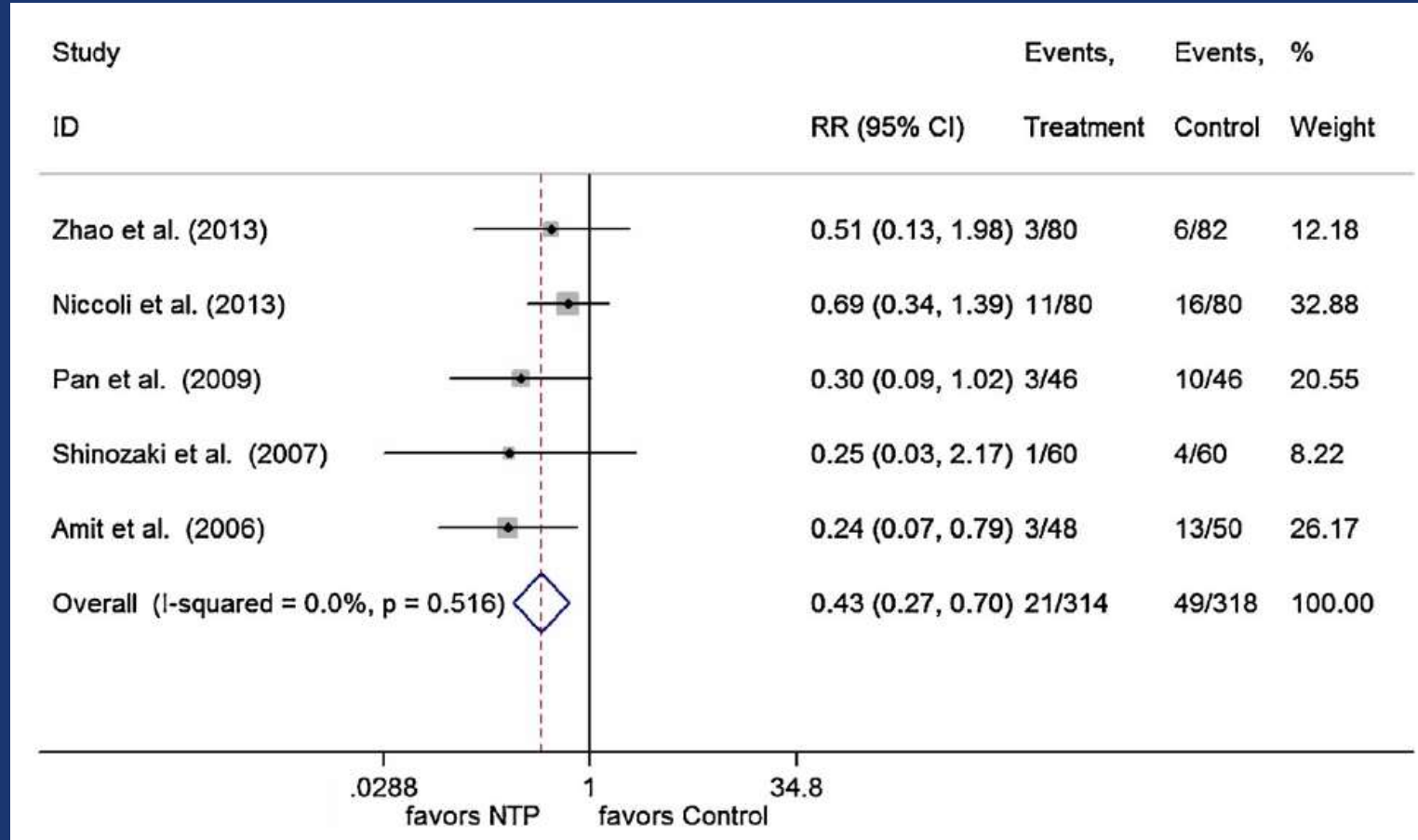
Nitroglycerin

No treatment

Saline

Zhao S. J Interv Cardiol. 2014

MACE



Control

Thrombus aspiration + Tirofiban

Thrombus aspiration + saline

Nitroglycerin

No treatment

Saline

Zhao S. J Interv Cardiol. 2014

Rotational atherectomy for AS patients

Cardiovascular Revascularization Medicine 18 (2017) 356–360



Contents lists available at ScienceDirect

Cardiovascular Revascularization Medicine



Can we perform rotational atherectomy in patients with severe aortic stenosis? Substudy from the OCEAN TAVI Registry^{☆,☆☆}



Toru Naganuma^{a,*}, Hiroyoshi Kawamoto^a, Kensuke Takagi^{a,b}, Hiroto Yabushita^a, Satoru Mitomo^a, Yusuke Watanabe^c, Shinichi Shirai^d, Motoharu Araki^e, Norio Tada^f, Futoshi Yamanaka^g, Masanori Yamamoto^h, Hirokazu Onishi^a, Sunao Nakamura^a, Akihiro Higashimoriⁱ, Minoru Tabata^j, Kazuki Mizutani^k, Hiroshi Ueno^l, Kentaro Hayashida^m



Clinical Outcomes

	Patient n=25
Procedural success	25 (100%)
Periprocedural MI	1 (4%)*
TVR up to 30 days following TAVI	0
ST up to 30 days following TAVI	0
Device success of TAVI	24 (96%)**
Coronary obstruction during TAVI	0
All-cause mortality up to 30 days following TAVI	0

*Periprocedural MI was recorded in 1 patient who underwent RA PCI and transapical TAVI at the same session.

**Valve-in-valve was performed in 1 patient.

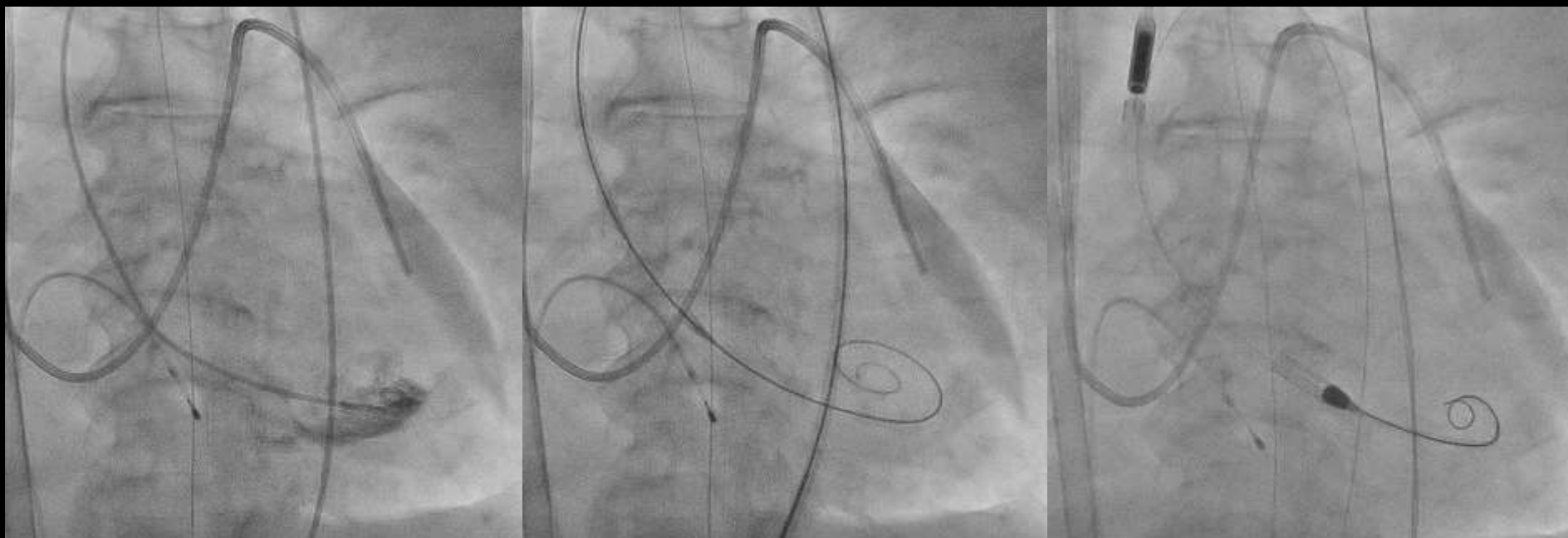


For successful RA in AS patients

- Mechanical support
- Catecholamine
- Intracoronary nitroprusside
- BAV during the same session
- Intracoronary imaging to reduce contrast
- Low burr-to-artery ratio (≤ 0.7)

68 yrs female

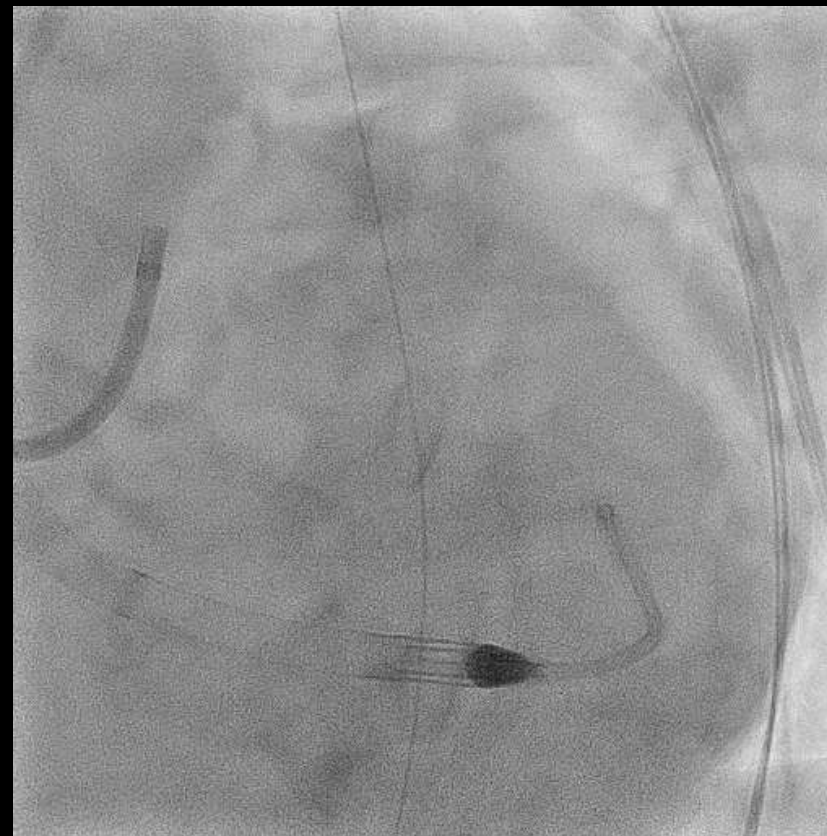
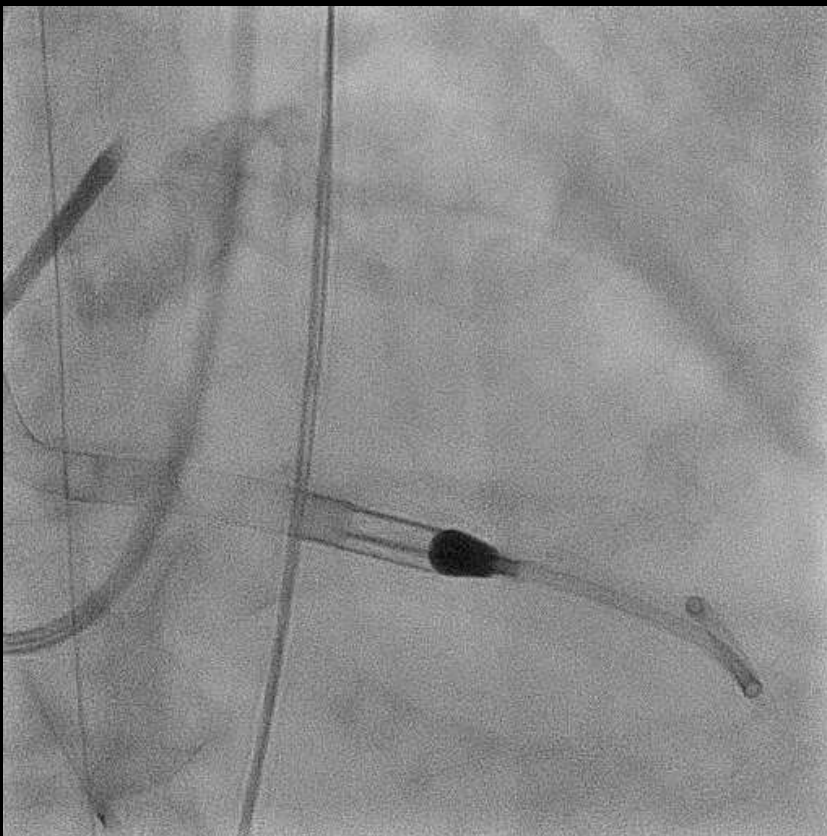
- Intubation, VA-ECMO due to cardiopulmonary arrest at another hospital
- Severe AS + LMD + TVD
- LVEF10% → extremely high risk for SAVR + CABG
- Transferred to our hospital



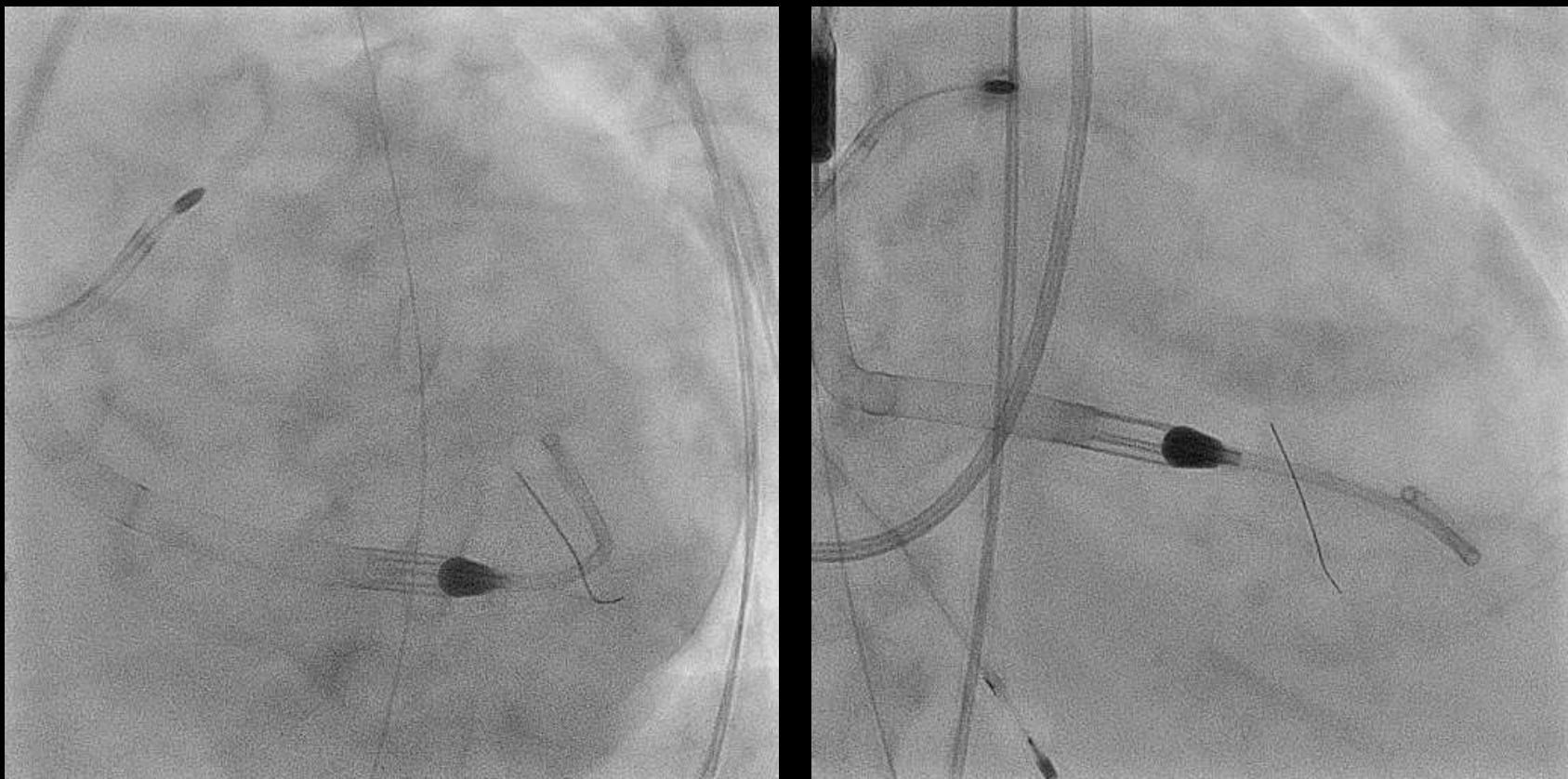
20mm INOUE

BAV⇒Impella

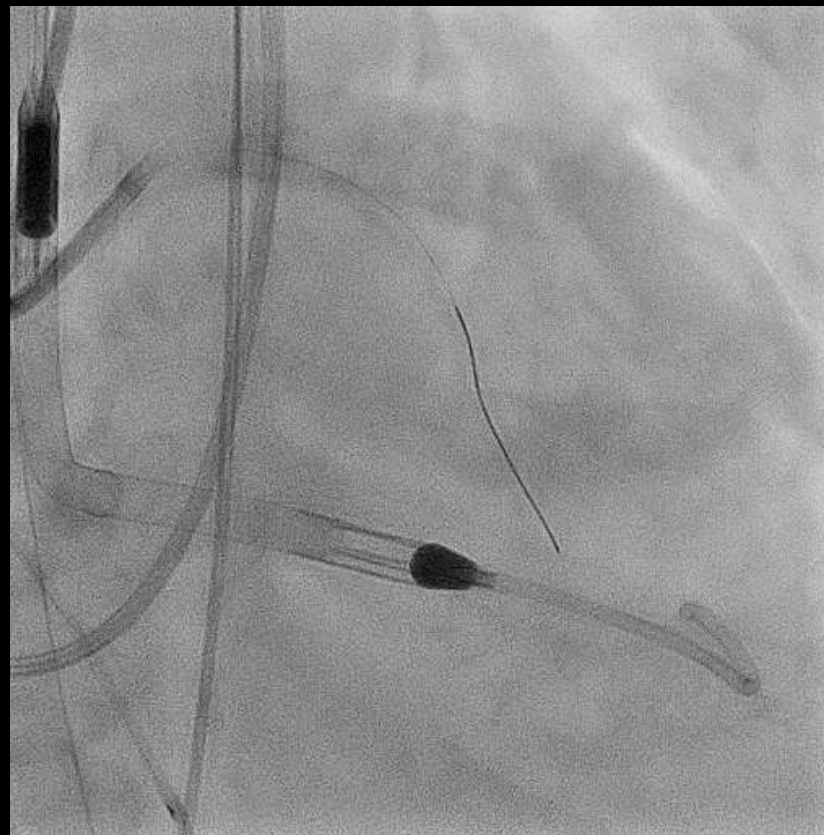
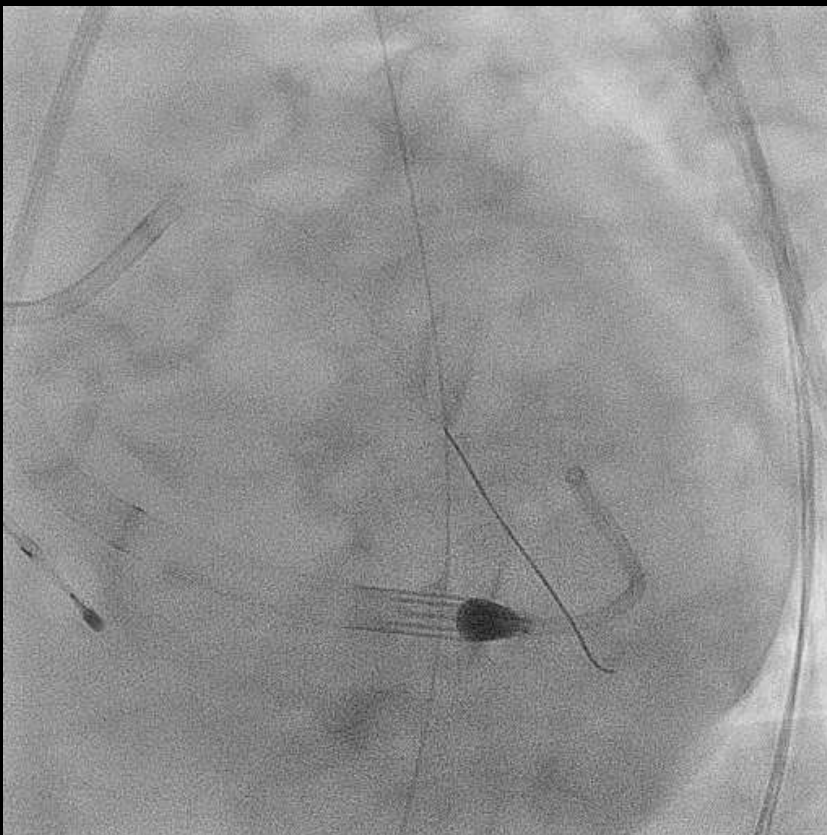
- Severe AS + LMD + TVD with diffuse, heavy, calc.



Rotational atherectomy + nitroprusside supported by ECMO/Impella

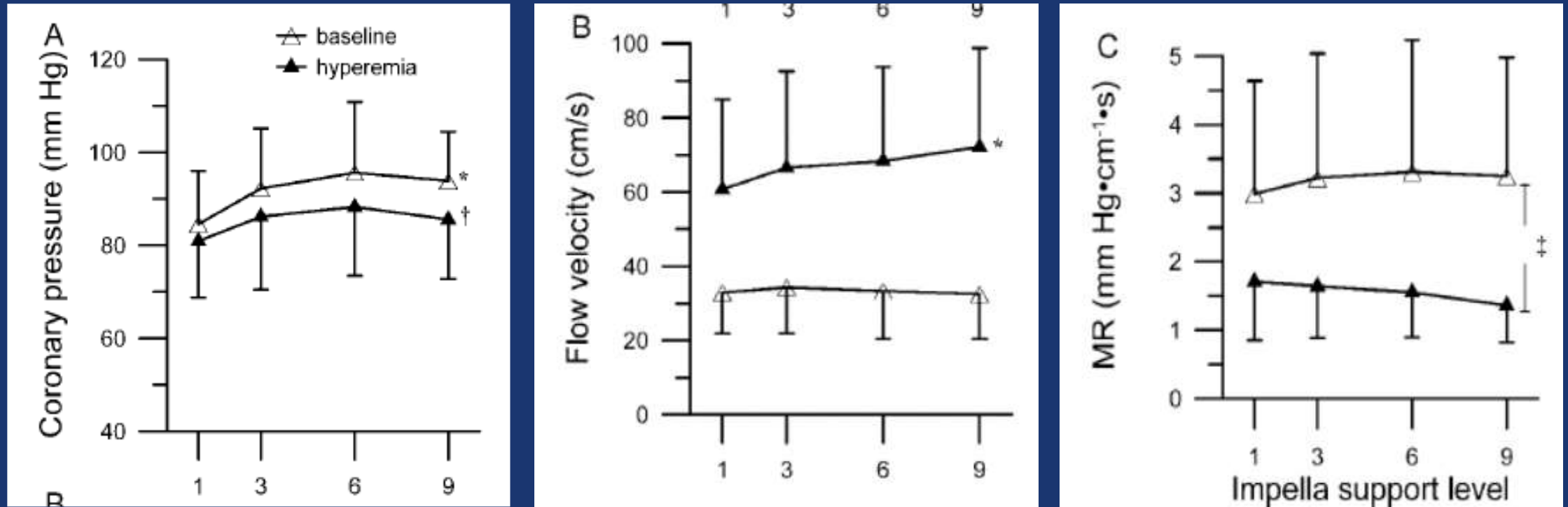


No slow flow!



POD2 : remove EVMO, POD4 : remove Impella, POD9 : extubation

Impella → coronary flow ↑



- Perfusion pressure ↑
- LV volume-related intramyocardial resistance ↓

Remmelink M. Catheter Cardiovasc Interv. 2007