ABORTED AND ABANDONED PRIMARY PCI

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Primary PCI is the *standard of care* for acute STEMI in all eligible patients.

Only a *fraction of STEMI* patients receive this .

Success rate of P-PCI ranges between 80-90 %

STEMI is the ultimate cardiac emergency

Time is muscle . . .

Who does the earliest intervention ?

Intrinsic fibrinolytic activity gets activated and begins to take on the thrombus head on .

This is the earliest intervention in STEMI by natural forces with zero time window .

The enigma of spontaneous thrombolysis !

The power of this natural lytic process has never been easy to predict and quantitate

The exact incidence is not known

In this era of primary PCI we have found a *new opportunity* to scrutinize this concept.

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Clinical research

Potential significance of spontaneous and interventional ST-changes in patients transferred for primary percutaneous coronary intervention: observations from the ST-MONitoring in Acute Myocardial Infarction study (The MONAMI study)

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The MONAMI study threw light on incidence of spontaneous thrombolysis : Nearly 20 %

Table 2 Coronary angiography data according to study group: group A, patients achieving spontaneous ST-resolution before coronary intervention; group B, patients with preserved ST-elevation immediately before coronary intervention and with no increase in ST-elevation during coronary intervention and group C, patients with preserved ST-elevation immediately before coronary intervention and with increase in ST-elevation during coronary intervention

	Group A ($n = 22$)	Group B ($n = 43$)	Group C ($n = 27$)	*P*-value
Number of diseased vessels	2 (1–3)	1 (1–3)	2 (1–3)	0.93
IRA findings at first contrast injection				
TIMI flow grade 3	13/22 (59%)	6/43 (14%)	2/27 (7%)	<0.001
Instantly visible collaterals[a]	7/21 (33%)	18/43 (42%)	14/26 (54%)	0.36
IRA findings during the procedure				
Thrombus length ≥5 mm	10/22 (46%)	24/43 (56%)	15/27 (56%)	0.70
Plaque length ≥5 mm	16/22 (73%)	38/43 (88%)	23/27 (85%)	0.26
Plaque calcification	10/22 (46%)	14/43 (33%)	9/27 (33%)	0.56
TIMI flow reduction during coronary intervention	3/22 (14%)	5/43 (12%)	5/27 (19%)	0.72
Distal embolization	1/22 (5%)	6/43 (14%)	4/25 (16%)	0.44
IRA findings according to final contrast injection				
TIMI flow grade 3	21/22 (96%)	31/43 (72%)	21/27 (78%)	0.09
Corrected TIMI frame count	21 (19–28)	29 (24–43)	37 (22–52)	0.007
Myocardial blush grade 3	15/20 (75%)	24/39 (62%)	12/24 (50%)	0.24

Dichotomous data presented as number/valid cases (%) and continuous data as median values (25–75th percentiles).
[a]Rentrop grade 1, 2, or 3 collaterals from contralateral or ipsilateral vessels towards IRA.

The aim of this study/presentation

Is to share our experiences that could occur when we plan for primary PCI .

- Related to spontaneous thrombolysis
- Related to complex coronary anatomy

Situation : One

A totally patent IRA or

A minimal & insignificant lesion or luminal irregularity .

The decision to proceed further is decided on table.

This can lead to *classical aborted PCI.*

Most commonly observed in *young men/smokers*.

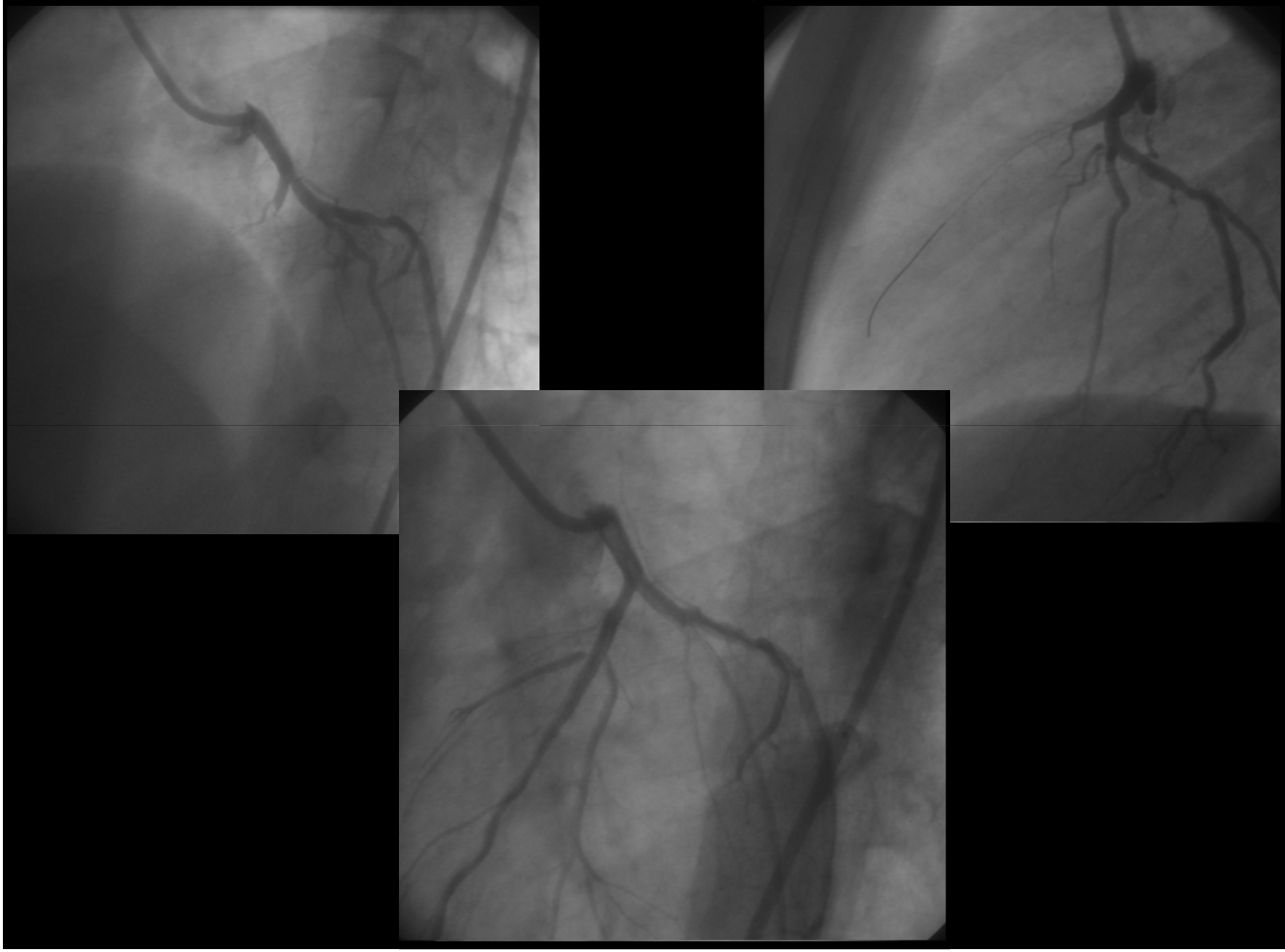
Pure thrombotic STEMI / minimal or No atherosclerosis

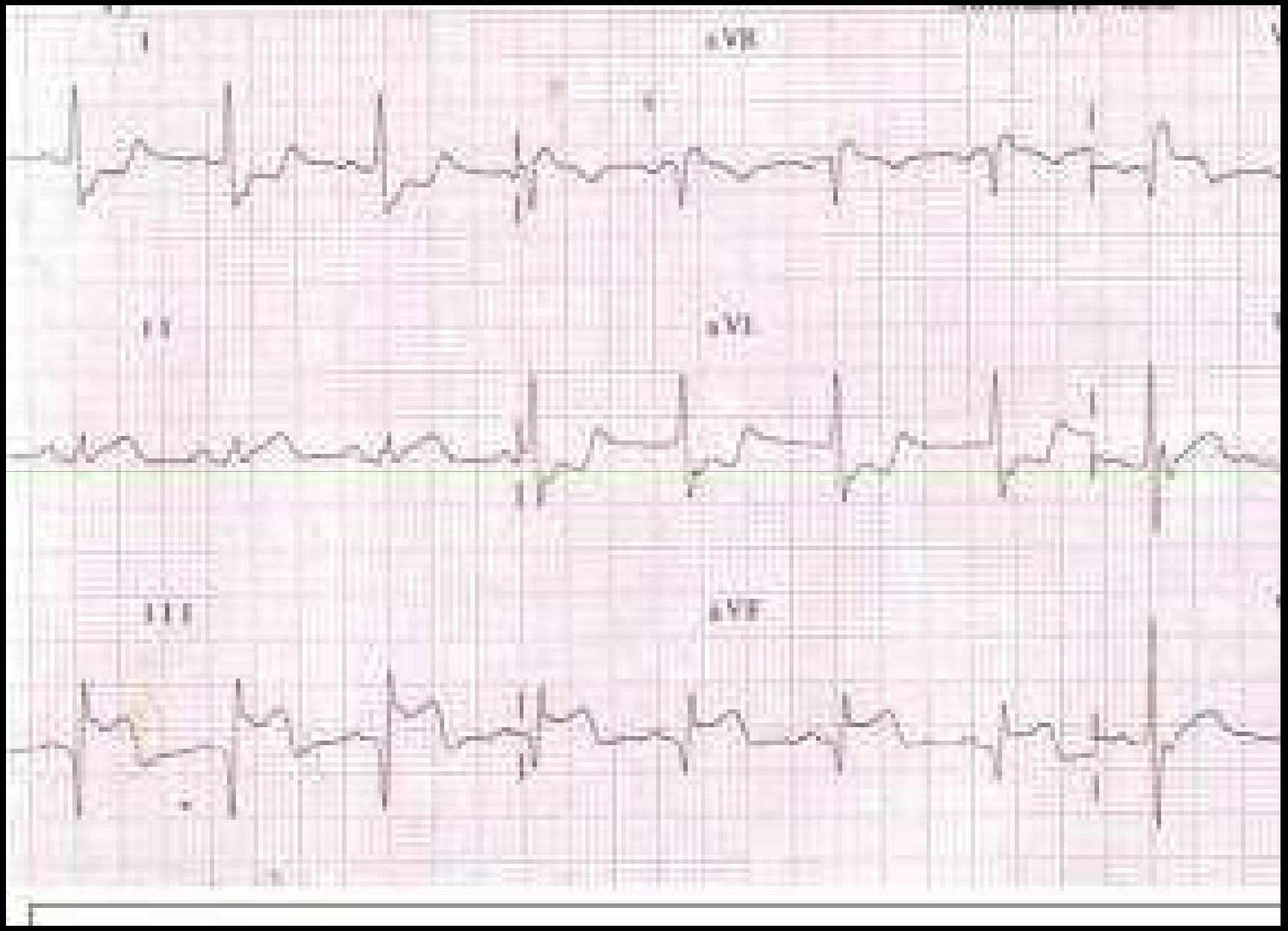
Situation : Two

Fully thrombus loaded lesion

Opens up once guide wire is crossed

Guide wire Angioplasty

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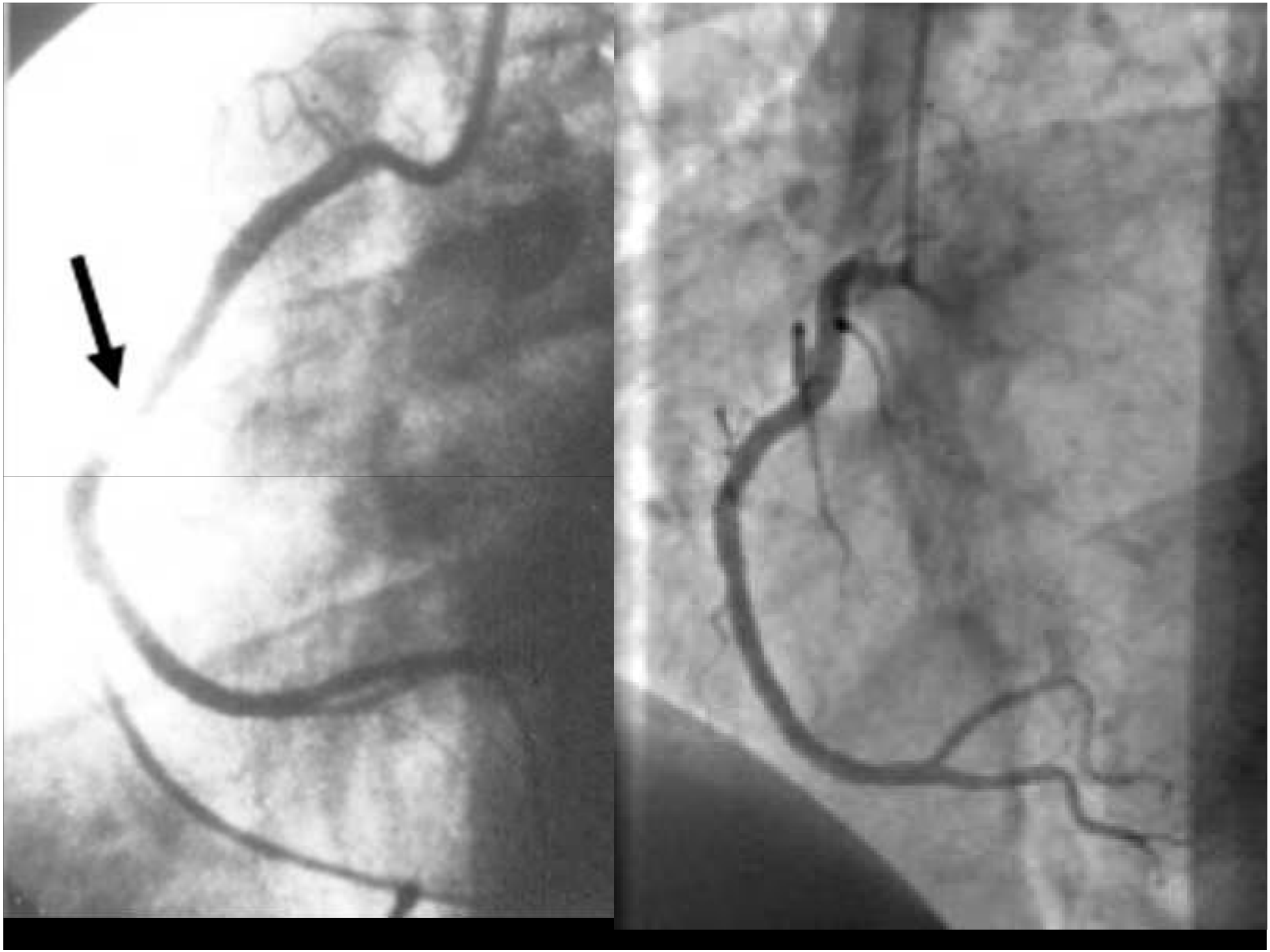
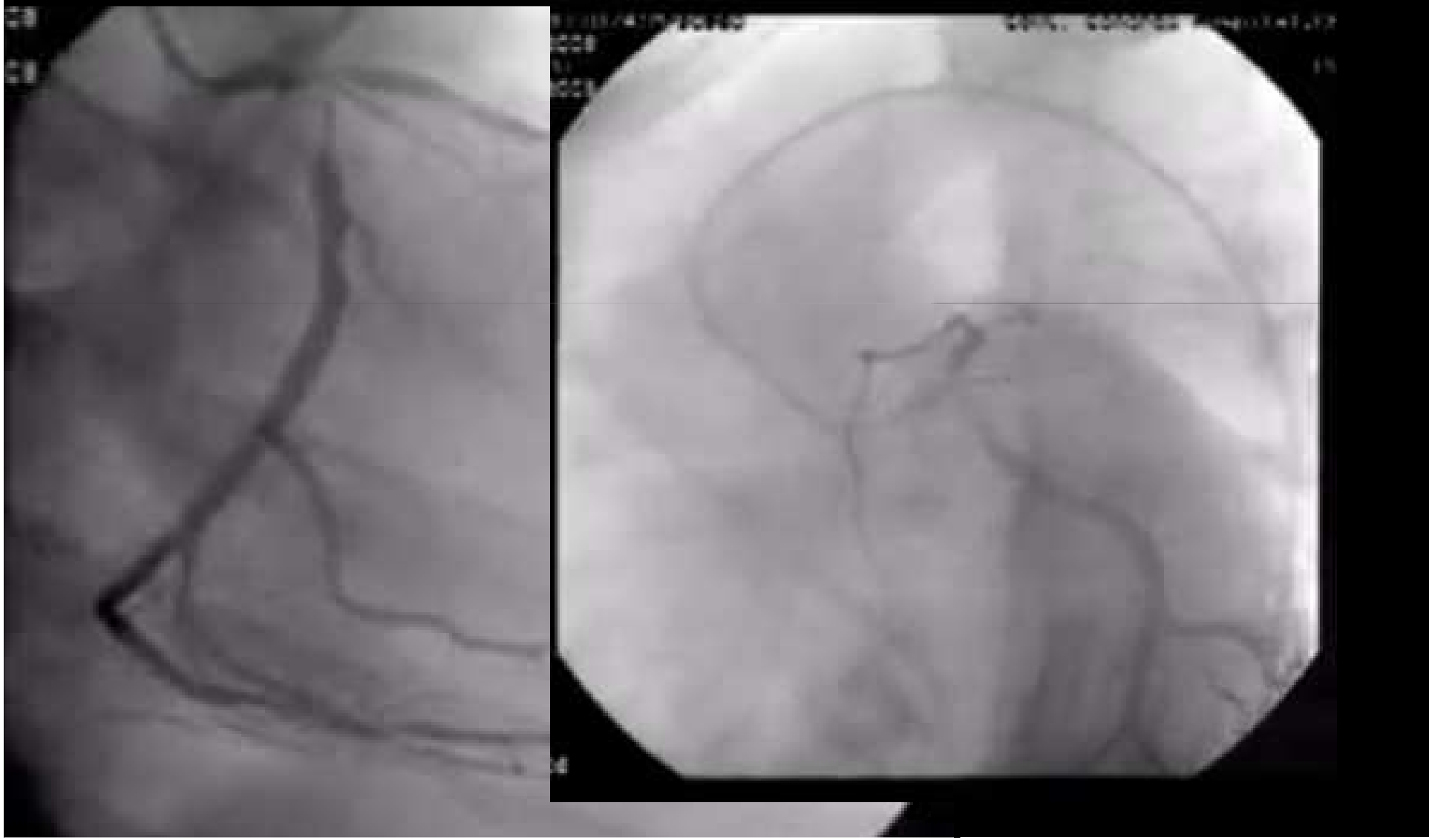
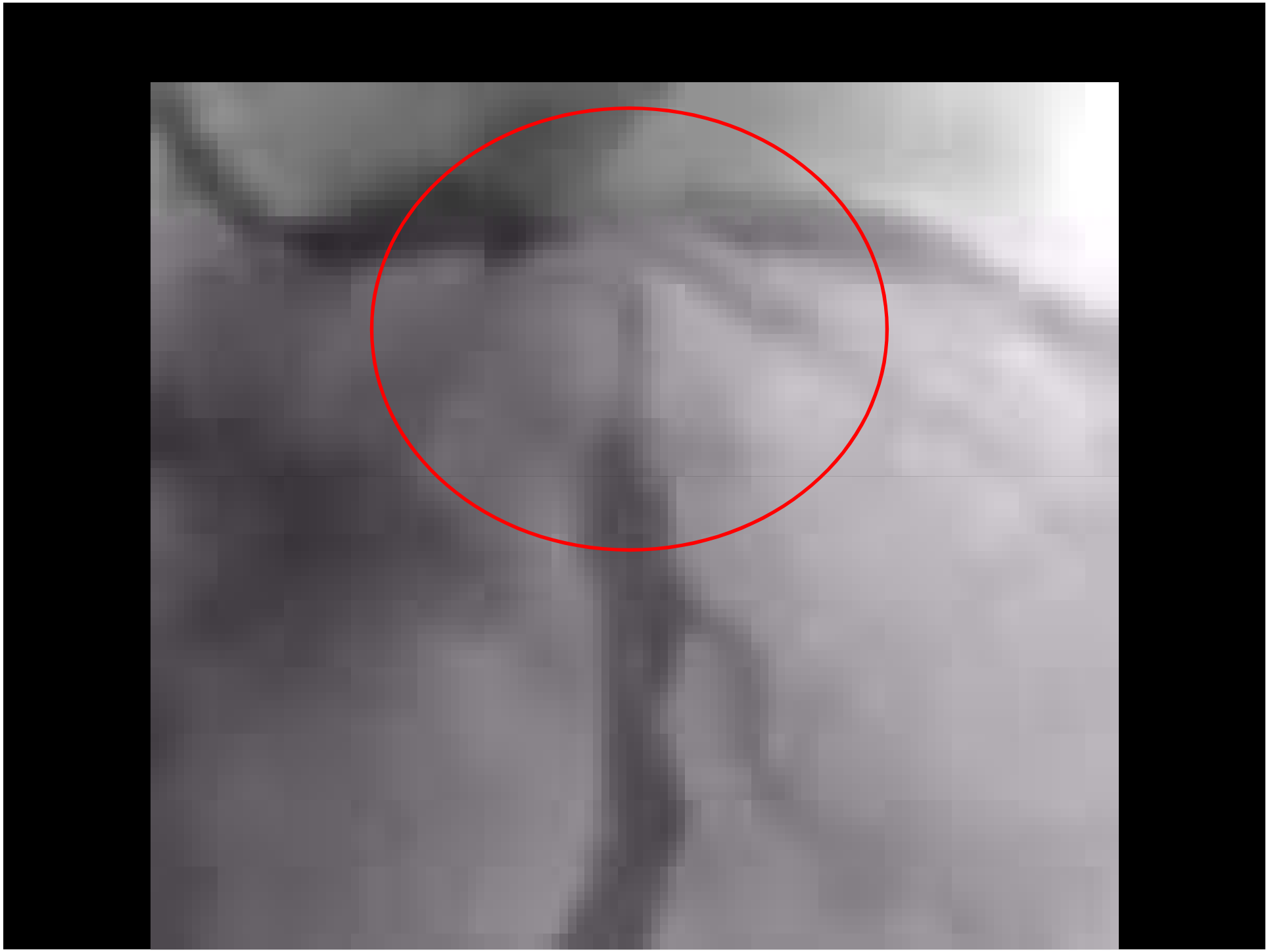


Situation : Three

- Complex vessel anatomy
- Difficulty in identifying IRA

Surprises during primary angioplasty





Situation Four : Diagnostic errors

Totally normal coronary angiogram

The ECG is mistakenly indentified as

STEMI (ERS / Non cardiac ST elevation etc)

Implication of aborted and abandoned Primary PCI

- Patient
- Cardiologist
- Cath lab staff
- CABG stand by team
- Corporate desk

Deploying a stent inside IRA is not our aim in STEMI , but to salvage myocardium .

If that has happened even before the patient enters cathlab . *Leave the patient alone* .

Temptation to put a stent on a fully recannalised IRA with a luminal irregularity to be resisted.

This is akin to doing a PCI in 10 -20 % lesion .

There is no published data to answer this issue .

Rescue thrombolysis in the Era of PCI

PCI coming to the rescue of thrombolysis is well known

Can thrombolysis be a back up option to primary PCI ?

When we have a complex anatomy on hand

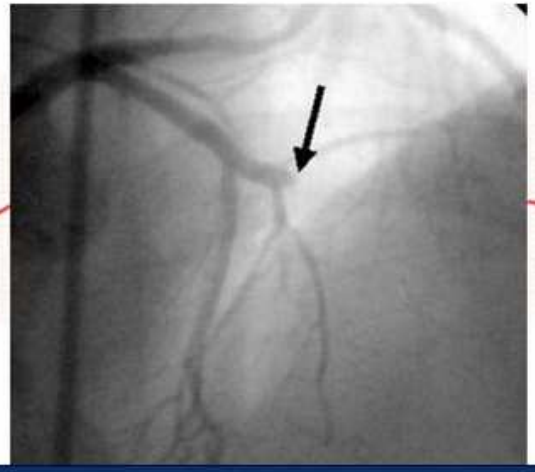
When IRA is not obvious .

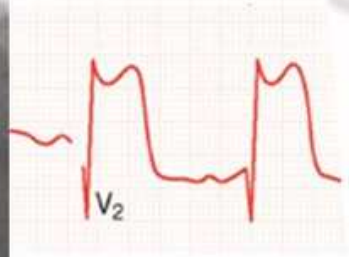
When CABG is not ready

A simple fall back thrombolysis may be the best option .

Conclusion

Expect for surprises in cath lab during primary PCI !





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PCI SCHEDULED 08.00PM
PCI DELAYED
PCI ABANDONED
PCI ABORTED

In the management of STEMI

Primary PCI once contemplated need not always reach it's *logical conclusion*.

It can get aborted or abandoned at various levels for various reasons.

In many it is therapeutically and financially *rewarding concept* for the patient and physician

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Thank you