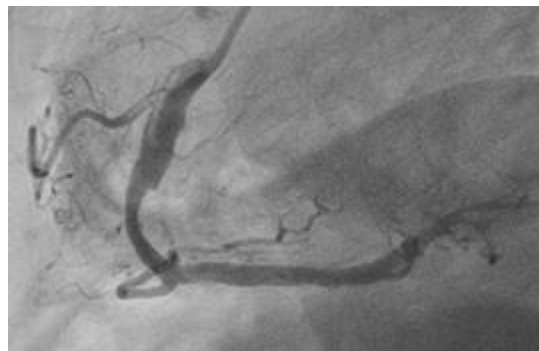
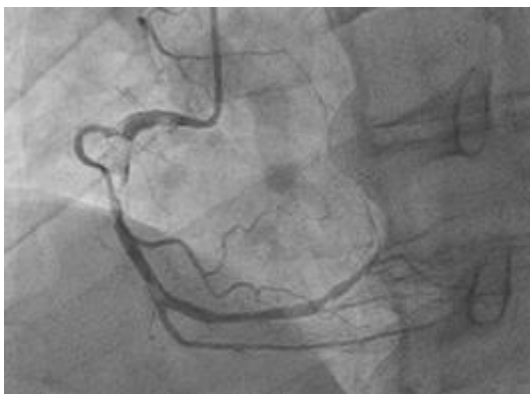


An observational study comparing deferred stenting plus early GPI therapy versus immediate stenting in well matched patients with acute coronary syndrome and large thrombus burden.

Background:

Although patients with ACS usually demonstrate TIMI 3-grade epicardial blood flow after PCI, a substantial proportion of them experience downstream microvascular embolization of thrombotic materials.

In the present study, we aim to investigate whether a minimalistic interventional approach with deferred stenting and intravenous infusion of glycoprotein IIb/IIIa inhibitors (GPI), is better to primary stenting without GPI infusion, in a matched group of ACS patients, with large thrombus burden.



Methods:

Twenty (20) highly matched patients presenting with ACS intended for PCI were separated in two groups: immediate stenting (IS) or deferred strategy with GPI infusion (DS).

Once optimal TIMI 3 blood flow was restored either spontaneously or via a minimal intervention (balloon only angioplasty) and patient was considered clinically stable, patient was treated either with IS or DS with GPI infusion at the operator discretion.

Results:

The degree of stenosis in the culprit artery after flow restoration and just before stent implantation, was significantly lower in DS patients (77.5% (± 16.9) vs 92.9% (± 3.9), $P=0.011$).

TIMI 3 flow grade in the culprit artery was restored in all patients of both groups and myocardial blush grade 3 (MBG) achieved in higher number of patients in the DS compared to IS group, but not statically significant (MBG-3 70% vs 40%, $P=0.18$).

Strong trend toward less distal embolization (0% vs 30%, $P=0.06$) and reduced need for stent implantation in the DS group (70% vs 100%, $P=0.06$).

Bleeding Academic Research Consortium (BARC) definitions were used with no statistical difference in bleeding and transfusion between the two groups.

	Overall Population	Immediate Stenting	Deferred Stenting
Grade 4 thrombus burden before stent implantation		10 (100%)	0 (0%)
Culprit artery stenosis before stent implantation (%)	85.2 (± 14.2)	92.9 (± 3.9)	77.5 (± 16.9)
TIMI 3 flow grade	20 (100%)	10 (100%)	10 (100%)
Myocardial Blush Grade 3	11 (55%)	7 (70%)	4 (40%)
Distal embolization	3 (15%)	3 (30%)	0 (0%)
Stent implantation	17 (85%)	10 (100%)	7 (70%)

Conclusions:

Deferred strategy did not significantly improved myocardial microcirculation.

Lower rates of distal embolization and less need for stent implantation, without increase in bleeding events, may guide physicians to adopt DS in specific patient population with high thrombus burden and elevated risk for micro- and macro-embolization.