

Predictors of intra-procedural stent thrombosis (IPST) during percutaneous coronary intervention (PCI): a pooled data analysis

A. Aggarwal¹, A. Jain¹, N. Beriwal²

¹Wayne State University School of Medicine, Rochester Hills, United States of America; ²Dr Ram Manohar Lohia Hospital, New Delhi, India

Funding Acknowledgement: Type of funding source: None

Background: Among all PCI related intraprocedural thrombotic events, IPST is rare but associated with worst outcomes.

Purpose: We conducted this study to identify specific patient and procedural characteristics that are associated with higher incidence of IPST.

Methods: Data on patient and procedural characteristics from all the studies comparing IPST without IPST was pooled for the purpose of analysis.

Results: 5 studies with a total of 21251 patients were included. IPST occurred in 170 patients (0.8%). History of a prior PCI (assumed to be on dual or single anti-platelet agent) was associated with decrease in IPST.

IPST occurred more in smokers, patients with abnormal cardiac enzymes at presentation, presentation with STEMI. Incidence of IPST was significantly higher in interventions involving left main artery or bifurcation or with bare metal stent placement. A low pre-TIMI flow of 0 or 1, baseline thrombus, not using upstream GpIIb inhibitors also significantly increased incidence of IPST.

Conclusion: Further studies are needed to validate above described patient and procedural risk factors. Using upstream GpIIb inhibitors in this specific high-risk population may help in prevention.

Predictors of IPST

	IPST (%)	No IPST (%)	p-value
DM	24.7	26%	0.71
HTN	68.56	70.71	0.55
Smoking	37.1	33	<0.001
Prior PCI	17	25.2	0.02
Prior CABG	7.5	10.2	0.27
Abnormal cardiac enzyme at presentation	56.3	38.3	<0.001
STEMI at presentation	45	29.3	<0.001
LAD treated	49	46	0.42
Left main treated	3.8	1.5	0.02
Bifurcation treated	51.8	16.2	<0.001
BMS	44.9	30.2	<0.001
DES	60.5	68.7	0.03
Upstream GpIIb inhibitor use	0	2.3	0.04
Pre-TIMI flow 0/1	44.4	25	<0.001
Baseline Thrombus	54.7	28.5	<0.001

Baseline and procedural characteristics compared for patients with and without IPST.