

## The Impact of Thrombus Aspiration on 1-year Mortality in Primary PCI for ST-elevation Myocardial Infarction, ACSIS 2010 Experience

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### **Background:**

Prior studies have suggested that thrombus aspiration (TA) in pts with STEMI undergoing PPCI may reduce 1-yr mortality.

### **Aim:**

Assess the impact of TA in consecutive STEMI pts undergoing PPCI on 1-yr mortality.

### **Methods:**

517 STEMI pts who underwent PPCI in 23 centers during ACSIS 2010 were included.

### **Results:**

Pts who underwent TA-PPCI vs. conventional (C)-PPCI were of similar age and had similar risk factors and history of coronary disease.

Variables independently associated with TA use: center (OR= 4.38, p<0.0001), TIMI 0-1 before PPCI (OR= 3.93, p<0.0001), IIB/IIIa inhibitors use (OR= 1.76, p=0.008) and diabetes (OR=0.58, p=0.03).

TA use was independently (Cox model) associated with decreased 1-yr mortality (HR= 0.31, p=0.042).

Similar results were obtained when adjusting for the propensity score (HR= 0.37, p=0.047).

Variables independently associated with increased 1-yr mortality were Killip Class  $\geq 2$ , MBG<3 at the end of PPCI and age.

	TA-PPCI (n=217)	C-PPCI (n=300)	P
Radial access (%)	27	28	0.91
Multivessel disease (%)	62	60	0.78
LAD-IRA (%)	48	46	0.25
Culprit lesion ostial-proximal(%)	47	42	0.26
Time from symptom onset to reperfusion (min; median,Q1,Q3)	195 (130,317)	188 (131,330)	0.78
TIMI flow 0-1 before PPCI (%)	80	56	<0.0001
Restoration of flow after guidewire	32	52	<0.0001
IIB/IIIa inhibitors use (%)	69	49	<0.0001
TIMI flow 3, end of PPCI (%)	90	92	0.38
Myocardial blush 3, end of PCI (%)	60	64	0.35
ST segment resolution 1 <sup>st</sup> ECG after PCI (%)	78	65	0.003
Drug Eluting Stent (n,%)	16	22	0.11
<b>Hospital Complications, 1-y mortality (%)</b>			
No reflow	5	3	0.46
Major bleeding	1.84	2.67	0.53
Acute renal failure	5.5	5	0.80
TIA/stroke	0	1.33	0.037
1-year mortality (n, %)	(8/217) 3.7	(20/299) 6.7	0.13

### **Conclusions:**

In the "real-world" practice use of TA in STEMI pts undergoing P-PPCI is associated with improved 1-year mortality.