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

Mady Moriel, Shlomi Matetzky, Amit Segev,
Aharon Medina, Ran Kornowski, Haim Danenberg,
Natalie Gevrielov-Yusim, Ilan Goldenberg,
Dan Tzivoni, Shmuel Gottlieb
for ACSIS and ACSIS-PCI Investigators

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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

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

Methods

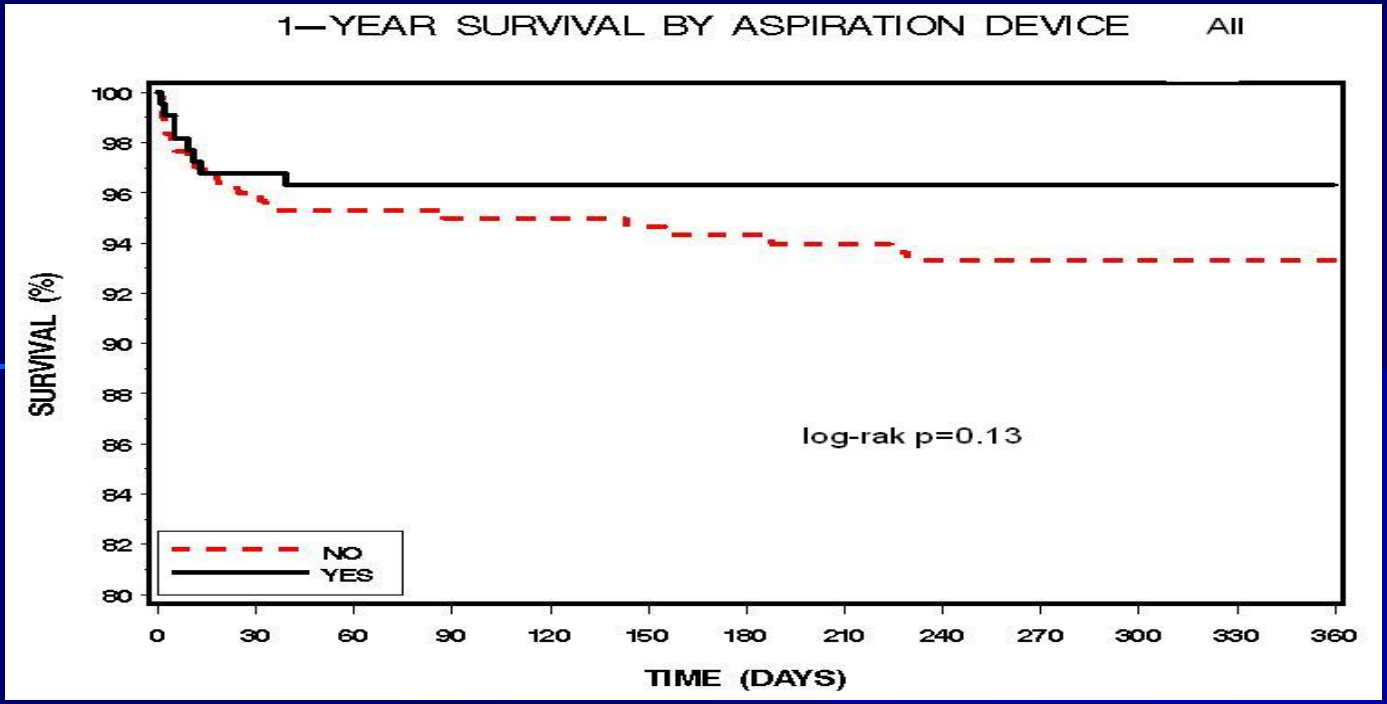
517 STEMI pts who underwent PPCI in 23 centers during ACSIS 2010 were included.

Results

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

Angiographic and PPCI Results, Complications and 1-year Mortality

	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 1st ECG after PCI (%)	78	65	0.003
Drug Eluting Stent (n,%)	16	22	0.11
Hospital Complications, 1-y mortality (%)			
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



3.7%

6.7%

Predictors of 1-year mortality

	Hazard Ratio (95% CI)	p
Killip Class ≥2	13.89 (4.52-42.71)	<0.0001
MBG<3	3.47 (1.25-9.65)	0.017
Age	1.1 (1.05-1.155)	<0.0001
Use of Aspiration	**0.31 (0.1-0.9)**	**0.042**
Use of IIb/IIIa	0.43 (0.12-1.55)	0.19

Conclusions

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