

급성심근경색 환자에서의 일차적 관동맥 성형술과 혈전용해술 및 지연 관동맥 성형술의 비교

김현중 · 권성욱 · 정진욱 · 권현철 · 박승우 · 김준수
김덕경 · 이상훈 · 홍경표 · 박정의 · 서정돈 · 이원로

Comparison of Outcomes between Primary Percutaneous Transluminal Coronary Angioplasty(PTCA) and Thrombolysis with Delayed PTCA in Patients with Acute Myocardial Infarction : Single Center Experience

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ABSTRACT

Background and Objectives : Many western studies have shown that primary percutaneous transluminal coronary angioplasty (PTCA) may have better clinical result over thrombolytic therapy in patients with acute myocardial infarction. There are, however, few reports about the role of primary PTCA in Korea. We reviewed the cases of primary PTCA and thrombolysis with delayed PTCA in Samsung Medical Center to compare the clinical outcomes of two treatment modalities. **Materials and Method :** This study was a non-randomized and retrospective trial. From August 1995 to March 1998, 80 AMI patients within 12 hours of symptom onset underwent primary PTCA (n = 26) or thrombolytic therapy (n = 54) in Samsung Medical Center. Patients who had thrombolysis were performed coronary angiography fourth to fifth hospital day routinely. Risk factors and time to treatment (pain-to-needle time and door- to-needle time) were reviewed from patient record. Angiographic data including TIMI flow were obtained from angiography data base and angiographic film. We compared the 30-day and 8-month event rate of death, re-infarction, re-PTCA, and CABG between two groups. **Results :** Baseline characteristics (sex, age, blood pressure, heart rate, AMI location, ejection fraction of left ventricle) were similar between two groups. There was no statistically significant difference in pain-to-needle time and door-to-needle time between two groups. The 30-day mortality rate was similar between two groups (primary group 3.8%, thrombolysis 5.6%, p = 1.0). The 30-day event rate also showed no difference between two groups (primary PTCA 7.7%, thrombolysis 11.1%, p = 1.0) and there was similar tendency in 8-month event rate (primary PTCA 19.2%, thrombolysis 14.8%, p = 0.62). However, the admission duration of primary PTCA group was shorter than that of thrombolysis (8.7 vs 12 days, p = 0.03). **Conclusion :** Primary PTCA have

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similar clinical outcome except shorter hospital admission duration when compared to thrombolysis with routine elective coronary angiography and delayed PTCA in AMI patients without cardiogenic shock. **(Korean Circulation J 1999;29(12):1281-1288)**

KEY WORDS : Primary PTCA · Thrombolysis · Acute myocardial infarction.

서론		Open Occluded Coronary Arteries in Acute Coronary Syndromes)	
		가	
		가	
. GISSI(Gruppo Italiano per lo Studio della Sopravvivenza Nell'Infarto Miocardico)		. 5-8)	
ISIS - 2(Second International Study of Infarct Survival), GISSI - 2, ISIS - 3, GUSTO - 1(Global Utilization of Streptokinase and Tissue Plasminogen Activator for Occluded Coronary Arteries)		가 가	
. 1-4)		, 가	
45~			
60	90	60~80%	
TIMI - III		재료 및 방법	
(Thrombolysis In Myocardial Infarction) flow		대상환자	
40~55%		1995 8	1998 3 12
가			
가			
가		30	
		12	가 가
		0.1 mV	ST
		2	18 70
가		(6	, ,
)	
PAMI(Primary Angioplasty in Myocardial Infarction Study), Netherlands, Mayo clinic, GUSTO - IIB(Global Use of Strategies to		, 70	
		가	

가 (non - randomized) (retrospective)

가 80 가 , ,

26 , ,

54 (pain - to - needle time),

30 8 ,

치료방법 , ,

150 .

, 30 2 /kg(150

)

tissue plasminogen activator(tPA)

, tPA 15 mg 30 0.75

mg/kg 60 0.5 mg/kg 연구종료시점

(Accelerated tPA). 3~5 (primary end point)

aPTT 60~85 30 8 , ,

가 가 (CABG) ,

4~5 .

75%

가 ,

가 ,

통계분석

(delayed PTCA) .

(categorical variable) Chi - square

가 (continuous data)

Student t - test

. Kaplan - Meier curve Log -

90% rank test p<0.05

10,000

가 activated coag -

ulation time 300 결 과

24

가

100~200 mg 대상 환자의 임상적 특징

1 가

residual stenosis 30% , ,

, TIMI 3 flow, 1 .

, , ,

(Table 1).

조사 방법

치료 시점까지의 시간

(pain - to - needle

time) 253.0 ± 24.0

Table 1. Patients characteristics in primary PTCA and thrombolysis group

	Primary PTCA (n=26)	Thrombolysis (n=54)	p value
Age (years)	59.1 ± 2.36	55.6 ± 1.3	0.17
Sex (M/F)	21/5	39/15	0.41
SBP (mmHg)	120.3 ± 4.2	130.3 ± 3.3	0.07
DBP (mmHg)	74.2 ± 3.3	77.1 ± 1.9	0.42
Heart rate (/min)	72.7 ± 5.1	80.5 ± 2.2	0.17
MI location			
ANT	14 (53.8%)	28 (51.9%)	
LAT	3 (11.5%)	2 (3.7%)	0.56
INF	9 (34.6%)	23 (42.6%)	
POST	0	1 (1.3%)	
LVEF (%)	52.2 ± 3.3	55.6 ± 2.1	0.37
LDL (mg/dl)	109.7 ± 5.88	127.9 ± 6.15	0.05
DM	7/26 (26.9%)	9/51(17.6%)	0.34
Smoking	18/25 (72%)	26/49 (53.1%)	0.12
Hypertension	11/26 (42.3%)	21/52 (40.4%)	0.87

SBP : systolic blood pressure, DBP : diastolic blood pressure
MI : myocardial infarction, LVEF : left ventricular ejection fraction

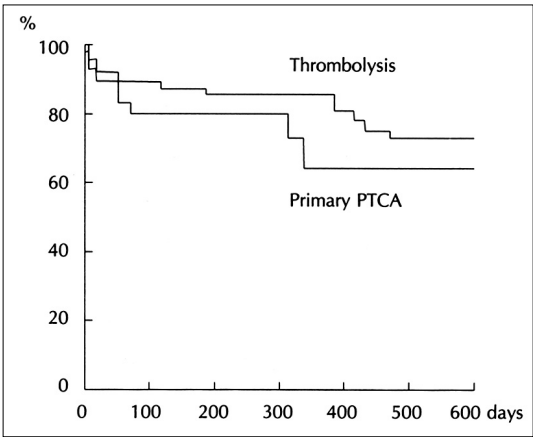


Fig. 1. Kaplan-Meier curve of event in primary PTCA and thrombolysis group (Log-Rank distribution, p=0.52).

3.8%(1/26) 5.6%(3/54)
(p = 1.00). 8
3.8%(1/26),
5.6%(3/54)
(p = 0.66).
, , ,
(pri -
mary end point) 30
7.7%(2/26
) 11.1%(6/54)
(p = 1.00). 8
19.2%(5/26), 14.8%(8/54)
(p = 0.62) (Table 2).
Ka -
plan - Meier (event - free
survival rate)
(p = 0.52) (Fig. 1).
(door - to - needle time)
(87.6 ± 12.9 vs. 74.2 ± 6.68, p = 0.
57) (Fig. 1).
30일, 8개월 임상경과
30
TIMI 0 16 (61.5%), TIMI I 6
(23.1%), TIMI II 3 (11.5%), TIMI III 1
(3.8%) 9 (34.6%)

Table 2. Comparison of event rate in 30-day and 8-month

Events	Primary PTCA		Thrombolysis	
	30-day	8-month	30-day	8-month
Primary end point	2/26 (7.7%)	5/26 (19.2%)	6/54 (11.1%)	8/54 (14.8%)
Death	1/26 (3.8%)	1/26 (3.8%)	3/54 (5.6%)	3/54 (5.6%)
AMI	0/26 (0%)	2/26 (7.7%)	0/54 (0%)	0/54 (0%)
Re-PTCA	0/26 (0%)	1/26 (3.8%)	0/54 (0%)	1/54 (1.9%)
CABG	1/26 (3.8%)	1/26 (3.8%)	3/54 (5.6%)	4/54 (7.4%)

Table 3. Angiographic findings before and after reperfusion therapy

	Pre-treatment TIMI flow		Post-treatment TIMI flow	
Primay PTCA	0	16/26 (61.5%)	0	-
	I	6/26 (23.1%)	I	-
	II	3/26 (11.5%)	II	-
	III	1/26 (3.8%)	III	26/26 (100%)
Thrombolysis & delayed PTCA	0	2/52 (3.8%)	0	1/52 (1.9%)
	I	4/52 (7.7%)	I	1/52 (1.9%)
	II	13/52 (25.0%)	II	6/52 (11.5%)
	III	33/52 (63.5%)	III	44/52 (84.6%)

(thrombus) . (p=0.03). 64

100% 6.5 ± 291.4 744.1 ± 444.6

TIMI III flow (Table 3). 16 (p=0.31).

(61.5%) 10 (38.5%)

54 52 (96%) 고 찰

4~5

TIMI 0 2 (3.8%), TIMI I 4 (7.7%), TIMI II 13 (25.0%), TIMI III 33 (63.5%) 가 .

10 (19.2%)

30% 8)

22 (42.6%) , ,

8 가 ST 1)9 - 11)

TIMI III flow 84.6% (Table 3).

가

TIMI flow 가 .

가 1980 Hartzler

TIMI III flow

83~95%,

6.8~9.3%, 1 85%

입원기간, 치료비용 12)

8.70 ± 100% , 8 3.8%

4.28 12.0 ± 7.02

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