

노인에서 발생한 급성심근경색증의 임상적인 특성, 병원내 사망율과 합병증의 비교

석준호 · 권준영 · 이재련 · 홍그루 · 전대진 · 박종선 · 신동구 · 김영조 · 심봉섭

= Abstract =

The Characteristics of Clinical Presentation and In-hospital Outcome of Acute Myocardial Infarction Patients Older than 65 Years of Age

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Background : The aging of the patient population is one of the most important factors influencing health care delivery. Currently 5% of the Korean population is elderly, defined as older than 65 years of age, with this group projected to increase to 13.1% by the year 2021. Cardiovascular disease is the leading cause of death and of disability in the elderly age group. Among them, coronary heart disease is the most important.

Method : Study population composed of 216 patients who were admitted to the hospital with first acute myocardial infarction and they were divided into two groups according to the age (older than 65 years of age vs younger). Clinical features, risk factors of coronary heart disease, in-hospital outcome and complication were compared in elderly patients and others group.

Results :

1) The risk factors of coronary heart disease is similar to younger patients but pattern of chest pain is less typical than younger patients.

2) Clinical presentation of elderly patients is similar to younger patients except Killip class on admission. (1.66 vs 1.91, $p=0.04$)

3) In-hospital mortality of elderly patients is higher than younger patients. In addition to an increased incidence of death, recurrent ischemia, stroke, AV block, ventricular arrhythmia, pulmonary edema occurred more frequently with advanced age.

4) Especially in the thrombolytic therapy group, in-hospital death, reinfarction and recurrent ischemia is higher than primary PTCA group in elderly patients.

Conclusions : Diagnosis of acute chest pain is difficult in elderly patients and in-hospital mortality and morbidity is higher than in younger patients. Thus more accurate diagnosis and discriminative therapeutic modality is needed.

KEY WORDS : Acute myocardial infarction · Elderly patients · In-hospital outcome.

216

서 론 65 69 , 65 147

가 가 1) 30

65 가 가 , 2) 2 1mm

ST , 3) CK - MB 2

12.1% 5%

1980 3.8% 가 65 49 , 65 121

2000 6.8%, 2021 13.1%가 (65 34 , 65 73)

1). (65 15 ,

65 48) . 216

6

1985 , (Triglyceride),

10 3.8 1991 11.6 (LDL - chol),

가 2). Hazzard 3) (HDL - chol), Lipoprotein(a), (fibr -

80% 가 65 inogen), (FDP,fibrinogen Degr -

85 가 dation product)

50% (squeezing) 가

가 ,

가 , Killip class,

가 ,

가 , Creatine phosphokinase(CPK) , CPK

가 ,

가 ,

가, ,

가, ,

4 - 6). ,

20 ST - T

30

ST , CK - MB

7 - 11).

A , B , C

12).

retrospective analysis ,

65

65

1. 통 계

Categoric variables chi - square

, Continuous variables ±

student t test

연구대상 및 방법

1992 8 1995 8

결 과

FDP

가 (Table 1, Fig. 1).

1. 허혈성 심질환에서의 위험인자의 차이

2. 급성심근경색증의 임상적 차이

1) 위험인자의 비교(65세 미만 vs 65세 이상)

1) 급성심근경색증의 증상의 차이

65

65

squ -

65

Table 1. Baseline characteristics of 216 patients stratified by age

	<65(n=147)	65(n=69)	p value
Age	53.1 ± 8.5	70.3 ± 4.6	
Sex(male%)	83.0	63.8	0.002
Smoking(%)	66.7	58.0	0.21
Diabetes(%)	21.1	14.5	0.25
Hypertension(%)	28.6	20.3	0.20
Systolic BP on admission	129 ± 27	124 ± 28	0.22
Time to referral(hr)	17.5 ± 18	13.6 ± 24	0.24
Time to therapy(hr)	19.5 ± 28	15.2 ± 20	0.30
Time to peak CPK	19.5 ± 8.9	22.9 ± 19.9	0.34
Peak CPK level	2523 ± 1945	3242 ± 2902	0.21
Admission day	15.4 ± 8.6	14.1 ± 5.7	0.18
Prior history of angina	27.9	47.8	0.004
Prior history of bypass	0.6	2.9	0.19
Prior history of heart failure	3.4	5.8	0.41
Infarct location in EKG(Ant)(%)	41.5	40.6	0.90
Infarct related artery(LAD)(%)	43.5	33.3	0.15
Killip class	1.66 ± 0.8	1.91 ± 0.8	0.04

Data presented are mean ± SD or %

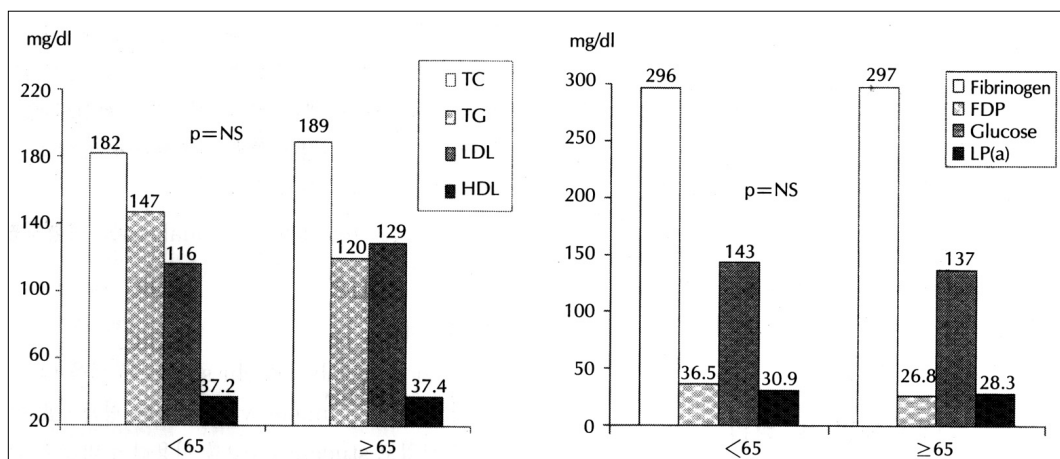


Fig. 1. The comparison of risk factors by age.

TC=Total cholesterol ; TG=Triglyceride ; LDL=Low density lipoprotein cholesterol ; HDL=High density lipoprotein cholesterol ; FDP=Fibrinogen degradation product ; LP(a) =Lipoprotein(a).

eezing or heaving 가 43.5% (p=0.01)
 65 53.7%
 가 (Table 3).

(radiation) 가 가 65
 2) 급성심근경색증 환자의 병원내 예후에 대한 나이와 일차 치료 수단과의 관계 170

(Table 2).
 2) 급성심근경색증 환자의 기타 임상 차이 2.1% 가 , 65 5.5%, 11.8%, 0%
 65 Killip class(1.66 vs 1.91, p=0.04), (27.9 vs 47.8, p=0.004)
 65 20.6%, 27.1%, 65 38.2%, 20% (PTCA)

(Table 1).
 3) 관상동맥의 형태학적인 차이 A , B , C
 , 65 48%,
 42%, 10% , 65
 26%, 35%, 39% B , C 가

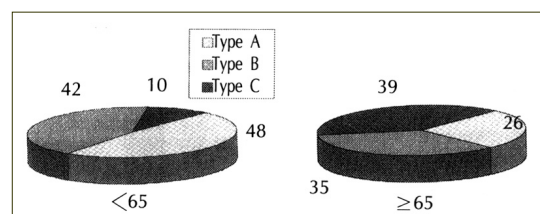


Fig. 2. The distribution of the type of coronary lesion of infarct related arteries in patients with acute myocardial infarction by age.

65 2 or 3 vessel (Fig. 2, 3).
 3. 급성심근경색증의 병원내 사망율과 합병증
 1) 연령에 따른 급성심근경색증의 병원내 사망율과 합병증
 65
 65 10.1%
 4.8%
 27.5% 13.6%

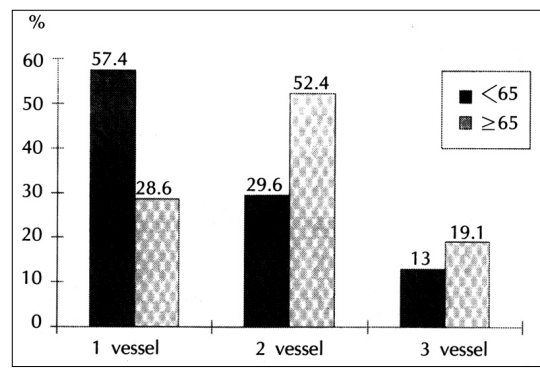


Fig. 3. The relation of number of diseased vessels in patients with acute myocardial infarction by age.

Table 2. Presentation of acute myocardial infarction by age

	<65(n=147)	65(n=69)	p value
Typical pain(squeezing or heaving)	53.7	43.5	0.16
Typical location(substernal)	74.8	59.4	0.21
Typical radiation(Left arm or shoulder)	48.3	39.1	0.21
Cold sweating or dyspnea	55.8	58.0	0.76

Data presented are %

65 6.9%, 0%
PTCA 65 2.9%, 0%
(Fig. 4).

고 안

65

Table 3. Effect of age on in-hospital outcome in 216 pt.

	<65 (n=147)	≥65 (n=69)	p value
Death	4.8	10.1	0.08
Recurrent ischemia	23.1	33.3	0.11
Reinfarction	4.1	2.9	0.67
Stroke	4.1	5.8	0.58
CPR	2.7	7.3	0.12
AV block	11.6	13.0	0.76
Ventricular arrhythmia	5.4	8.7	0.37
Supraventricular arrhythmia	10.2	5.8	0.57
Pulmonary edema	13.6	27.5	0.01

Data presented are %

12-14)

가

가

(Table 4)²⁾.

가

가

가

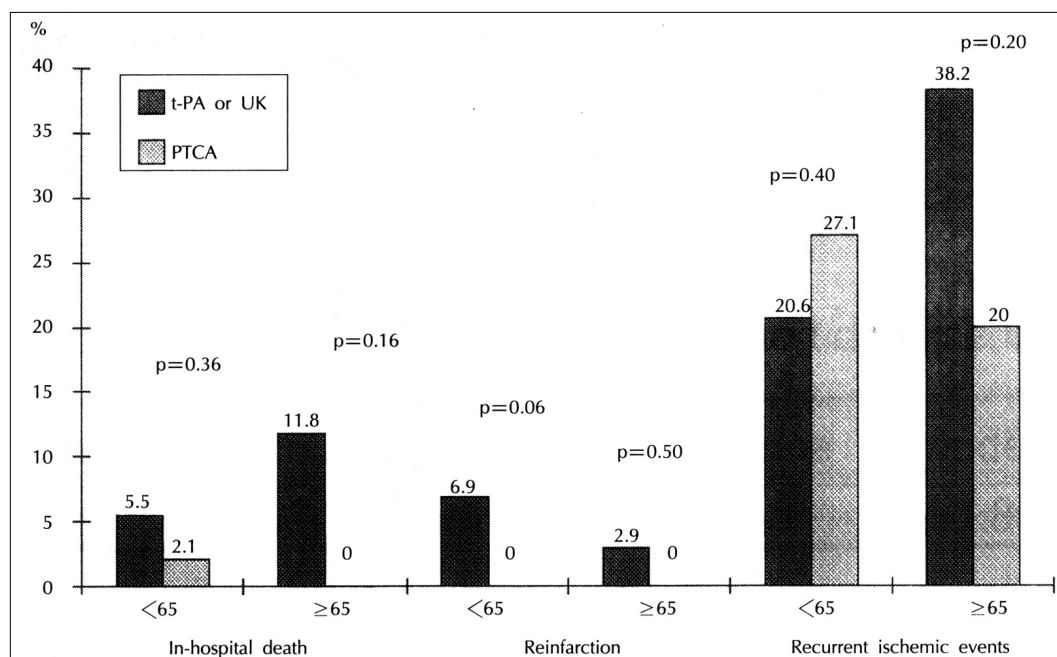


Fig. 4. Interaction of age and primary treatment modality on in-hospital outcome in 170 patients with acute myocardial infarction. PTCA=percutaneous transluminal angioplasty; t-PA=tissue-type plasminogen activator; UK=urokinase.

Table 4. Mortality rates of ischemic heart disease in each nation

Korea	U.S.A.	England	France	Sweden	Japan
11.6	207.7	295.3	89.5	332.8	41.9

(mortality rates per 0.1 Million population)

가 15).
75%, 가 가 17-18). 65 (p
90%가 가 가 =0.002).
가
7-11). William P Castelli 65
가 가 19)
가 가
가 가
가 Treadmil 가
가 Gregg , 가 65
W
63%, 50% Killp class가
16) 43.5% (1.66 vs 1.91,p=0.04).
가
65 10.1%
4.8%
A , B , C

Table 5. Characteristics type A, B and C lesion

Lesion specific characteristics	
Type A lesion (high success, >85% ; low risk)	
Discrete(< 10mm length)	Little or no calcification
Concentric	Less than totally occlusive
Readily accessible	Not ostial in location
Nonangulated segment, <45 °	No major branch involvement
Smooth contour	Absence of thrombus
Type B lesion (moderate success, 60 - 85% ; Moderate risk)	
Tubular (10 to 20mm length)	Moderate to heavy calcification
Eccentric	Total occlusion >3 months old
Moderate tortuosity of proximal segment	Ostial in location
Moderately angulated segment, 45 - 90 °	Bifurcation lesions
Irregular contour	Some thrombus present
Type C lesion (low success, <60% ; high risk)	
Diffuse (> 2cm length)	Total occlusion >3 months old
Excessive tortuosity of proximal segment	Inability to protect major site branches
Extremely angulated segment >90 °	Degenerated vein grafts with friable lesions

(Table 5)⁷⁾ 65

A , C (A - 48%, B - 42%, C - 10% vs A - 26%, B - 35%, C - 39%, p<0.05).

가

가

가

가 1) 65
가 2) Killip
calss가 3) B , C 65
가 4) 가
5) 방 법 :
1992 8 95 8
216
GISSI, ISIS - 2, ASSET, 30
AIMS Trial Study Group placebo - controlled 2 1mm ST , CK -
20 - 23) MB 2 . 65
salvage 69 , 65 147
20 30% 170
216
PTCA , , , Killip class,
, Stone GW ¹⁶⁾ ,
65 , 65 PTCA , , ,
가 . , , ,
PTCA
결 과 :
1) 65
65
가
FDP 가 , ,
2) 65
Killip class
(1.66 vs 1.91, p=0.04)
가
3) 65
B , C 가 ,
2 or 3 vessel .
4) 10.1% 4.
8% , 27.5%

요 약

연구배경 :
65 가 가

13.6%
(p = 0.01)
가
5) 65 PTCA

결 론 :

Killip class가

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