

## 급성 하벽 심근경색증에서 측부 사지유도(Lateral Limb Leads)에서 ST절 하강의 임상적 의의

조진만 · 강홍선 · 조정휘 · 김권삼 · 송정상 · 배종화

### ST Segment Depression in Lateral Leads in Inferior Wall Acute Myocardial Infarction

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#### ABSTRACT

**Background :** The electrocardiogram may provide valuable information regarding the identity of the culprit coronary artery and the location of obstructing lesion within the artery, which may be of guidance in selecting the therapeutic modality. Previous studies have concluded that changes in lateral leads (I, aVL, V5, V6) are predictive of left circumflex coronary artery obstruction in inferior wall acute myocardial infarction. Electrocardiographic criteria for determining the location of the obstructing lesion, however, have not been well established. The purpose of this study is to investigate the patterns of ST segment depression in lateral leads in inferior wall acute myocardial infarction and the obstruction site of culprit artery according to ST segment depression in lateral leads. **Methods :** We examined 78 patients with inferior wall acute myocardial infarction analyzing their electrocardiogram and coronary angiography which performed during acute hospitalization. **Results :** Of the fifty-five patients in which the culprit artery could be determined, 1) in 41 the culprit artery was the right coronary artery (19 proximal to the right ventricular branch and 22 distal), and in 14 the left circumflex coronary artery (7 proximal to the first obtuse marginal branch or involving a high first obtuse marginal branch, and 7 with distal obstruction). 2) Significant ST depression (ST  $\geq 1$  mm) in leads I and aVL was more common in right coronary artery obstruction ( $p < 0.05$  and  $p < 0.01$  respectively) than left circumflex artery. 3) It was difficult to define the location of obstruction with ST segment change of lateral precordial leads (V5, V6). **Conclusions :** In acute inferior wall myocardial infarction, ST segment depression in lateral limb leads (I, aVL) can be indicative of the right coronary artery obstruction and the ST segment depression pattern in lateral precordial leads was not indicative of the site of obstruction. (Korean Circulation J 1998;28(11):1836-1840)

**KEY WORDS :** Inferior wall acute myocardial infarction · ST depression in lateral lead.

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서론

심전도 분석

ST (downsloping) ST 0.08

관동맥조영술 소견분석

(right coronary artery)

(the first right ventricular branch)

(left circumflex artery) first obtuse marginal branch

Birnbaum

통계

ST prizm software program GraphPad Fisher's exact test p 0.05

## 재료 및 방법

## 결과

대상

78

78

2

23 55

38

17 60.0±8.1 42

75

1) 30

2) 2

3) 2

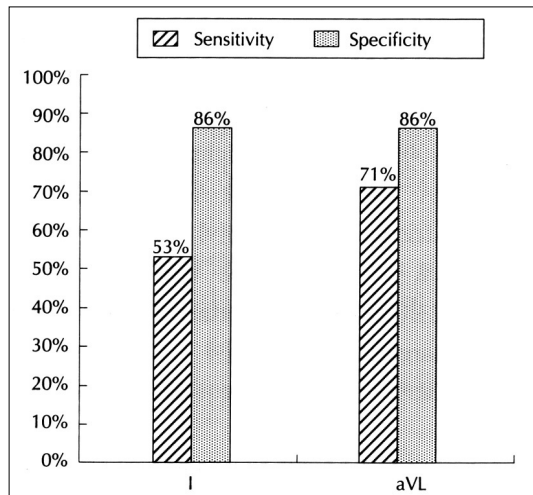
(II, III, aVF) 1 mm ST

가

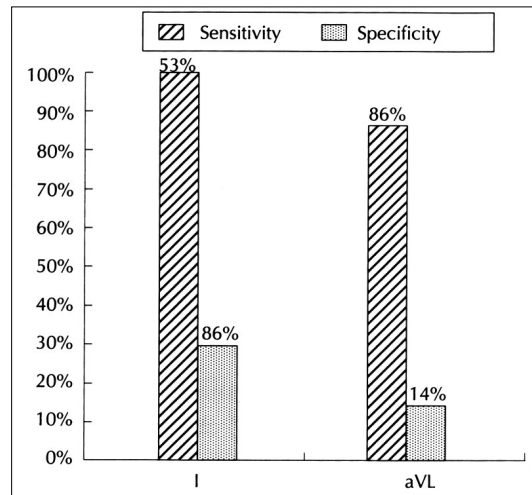
**Table 1.** Comparison of ST segment depression in lateral leads

	(n=41)	(n=14)
Lead I		
ST depression ( - )	19	12
ST depression ( + )	22*	2
Lead aVL		
ST depression ( - )	12	12
ST depression ( + )	29 <sup>†</sup>	2
Lead V5		
ST depression ( - )	29	12
ST depression ( + )	12	2
Lead V6		
ST depression ( - )	37	12
ST depression ( + )	4	2

\*p<0.05, <sup>†</sup>p<0.001



**Fig. 1.** Sensitivity and specificity of the ST segment depression in lateral limb leads that indicates RCA obstruction.



**Fig. 2.** Sensitivity and specificity of the absence of ST depression in lateral limb leads were prominent in LCX proximal lesion.

**Table 2.** Comparison of ST segment depression in lateral limb leads and the site of the obstruction in the infarct-related artery

	(n=19)	(n=22)	(n=7)	(n=7)
Lead I				
ST depression ( - )	7	11	7	5
ST depression ( + )	12	10	0	2
Lead aVL				
ST depression ( - )	6	6	6	6
ST depression ( + )	13	16	1	1

**Table 3.** Comparison of ST segment depression in lateral precordial leads and the obstruction in the infarct-related artery

	(n=19)	(n=22)	(n=7)	(n=7)
Lead V <sub>3</sub>				
ST depression ( - )	13	16	6	6
ST depression ( + )	6	6	1	1
Lead V <sub>6</sub>				
ST depression ( - )	17	20	6	6
ST depression ( + )	2	2	1	1

23 . 55

41 (75%) , 14 (25%)

(aVL, I) ST

(Table

1) 41 I 22 ST

가 56% ,

14 1 ST

12 가 86% , aVL

41 29 ST

가 71% ,

14 12 aVL ST

1 가 86% (Fig.

1). 2 ST 22

I aVL

ST

7 1 7 ST

가 100%

7 2 ST

29% , aVL 7 6

ST 가 86% ,

7 1 ST 14%

(Table 2, Fig.

(V<sub>5</sub>, V<sub>6</sub>)

2).

ST (Table 3).

고 찰

ST ST reci -

procal phenomenon , , 5)8)

6) 가 high marginal branch가

I aVL ST Hasdai 9)

aVL ST aVL

ST

7) I ST

가 12

Bairey 2)

aVL I ST ,

29 21 Huey

(reciprocal) 8) Huey 1) ST 1)

aVL ST I ST 가

가 Bairey 2)

aVL 1 mm (V<sub>5</sub>, V<sub>6</sub>) ST

ST 12 4

29 24 I aVL 가

Hasdai 9)

46 aVL ST

16 10

aVL ST ST

7 6 aVL ST

obtuse marginal branch ST 가 Strasberg

12)

V<sub>5</sub>, V<sub>6</sub> ST

Dunn 10)

ST

distal marginal branch , I aVL

(inferior lead) 가 가 가 ST

Hasegawa 11)

aVL ST 가 ST 가

ST 가 Hasdai 9)

(I, aVL)

가

가

## 결론:

가

ST

ST

ST

가

중심 단어 :

• ST

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wrap

around

가

가

요약

연구배경 :

가

ST

ST

### 재료 및 방법 :

78

결 과 :

1)

55

41 가

14 가

가

1

aVL

ST

가

3)

V5

V6

ST