

## 좌주간부 협착 병변의 임상 양상과 치료 : 최근 4년간의 변화

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## Recent 4 Year Trends in Clinical Findings and Treatment Modalities of the Left Main Coronary Artery Stenosis

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## ABSTRACT

**Background :** A stenosis of the left main coronary artery has critical prognostic importance. Recent reports on successful left main stenting are now challenging traditional treatment patterns for this lesion. We evaluated the recent four-year trends in incidence, clinical, angiographic findings and treatment modalities in patients with left main coronary artery stenosis (LMS). **Methods :** Patients who were diagnosed as a significant LMS at Yonsei cardiovascular hospital between 1996 and 1999 were analyzed retrospectively. **Results :** The incidence of LMS during the period of 1996 to 1999 was 3.3% (n = 224) and it was significantly higher than that of the previous 15 years previous before to 1996 (p<0.01). The incidence of isolated ostial lesion was 0.28% and this lesion was more prevalent in young female patients with less risk factors as compared with other types of LMS (p<0.01). After exclusion of the patients with an isolated ostial lesion, patients were grouped according to the lesion site : ostium, shaft, and shaft lesion extended to distal vessels. There were no significant differences in clinical and hemodynamic findings among these groups. Coronary artery bypass graft was performed in 141 patients (63%) and stent implantation in 16 patients (14%). **Conclusion :** The incidence of LMS has been increased. There was no difference in the clinical and hemodynamic findings according to the types of LMS. Surgery is still a standard treatment, but however, in selected patients percutaneous coronary intervention can be another treatment option. (**Korean Circulation J 2001;31(2):153-158**)

**KEY WORDS :** Left main coronary artery · Stenosis · Coronary artery bypass · Stents.

## 서 론

3 10%<sup>1-3)</sup> , 가 .

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: 2001 2 28  
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가  
가  
6)11-13)  
4  
224  
대상 및 방법  
1996 1 1999 12  
50%  
224  
19 ( 5 ,  
14 ; 49±9.8 )  
28 1 ( 가  
22 , 6 ; 65±10.1 ) ,  
121 2 ( 93 ,  
28 ; 61±9.9 ) ,  
56  
3 ( 44 , 12 ; 61±8.7 ) ,  
± 2  
t , 3  
p 0.05

## 결 과

대상환자  
224 가 164 (73%) 가  
60 (27%) 61±10.3

111 (50%) 가  
119 (53%),  
109 (49%), 67 (30%), 38  
(17%), 가 15 (7%)  
가  
가  
48  
(21%)  
55±15.6%(125 )  
19±8.2 mmHg(204 ) (Table 1).  
좌주간부 병변 빈도의 변화  
1995 1999  
224 6,871  
3.3%  
19 0.28%  
7.1%

**Table 1.** Patient characteristics (n = 224)

Male/Female	164/60 (73/27%)
Age (years)	61±10.3
Diagnosis	
Unstable angina	111 (50%)
Acute myocardial infarction	34 (15%)
Stable angina	55 (25%)
Others	24 (10%)
Risk factors	
Hypertension	119 (53%)
Smoking	109 (49%)
Diabetes mellitus	67 (30%)
Hypercholesterolemia*	38 (17%)
Family history	15 ( 7%)
Previous angiography	48 (21%)
Left ventricular ejection fraction (n = 125)	55±15.6%
LVEDP (n = 204)	19±8.2 mmHg

\* : Total cholesterol > 240 mg/dl,

† LVEDP : left ventricular end diastolic pressure

**Table 2.** Changes in the incidence of left main disease diagnosed on coronary angiogram

	1980 - 1995 (n = 15995)	1996 - 1999 (n = 6871)	p value
Left main lesion	150 (0.9%)	224 (3.3%)	<0.001
Isolated left main ostial lesion	16 (0.1%)	19 (0.28%)	NS*

\*NS : not significant

**Table 3.** Comparison of clinical and hemodynamic data between patients with isolated ostial lesion and others

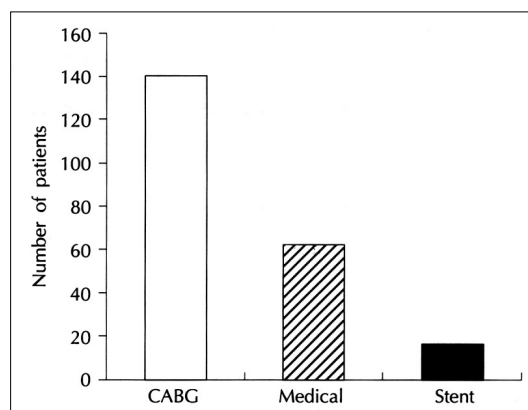
	Isolated ostial lesion (n = 19)	Other main lesions (n = 205)	p value
Age (years)	49 ± 9.8	62 ± 9.7	<0.001
Male/Female	5/14 (26/74%)	159/46 (78/22%)	<0.001
Risk factor*	0.7 ± 1.11	1.6 ± 0.89	<0.001
Diagnosis			
UA/AMI/SA <sup>†</sup>	11/2/4 (58/11/7%)	100/32/51 (49/16/25%)	NS
LVEF (%) <sup>‡</sup>	55 ± 17.7 (n = 8)	55 ± 15.5 (n = 117)	NS
LVEDP(mmHg) <sup>§</sup>	18 ± 9.2 (n = 15)	20 ± 8.2 (n = 189)	NS

\* : Total number of the risk factors, <sup>†</sup>UA : unstable angina, AMI : acute myocardial infarction, SA : stable angina, <sup>‡</sup>LVEF : left ventricular ejection fraction, <sup>§</sup>LVEDP : left ventricular end-diastolic pressure, NS : not significant

**Table 4.** Clinical and hemodynamic data of the patients without isolated ostial lesions according to the lesion site

	Ostium (n = 28)	Shaft (n = 121)	Extended (n = 56)	p value
Age (years)	64 ± 10.1	61 ± 9.9	61 ± 8.7	NS
Male/Female	22/6	93/28	44/12	NS
Risk factor*	1.4 ± 0.84	1.6 ± 0.87	1.7 ± 0.95	NS
Diagnosis				NS
UA/AMI/SA <sup>†</sup>	12/10/5	55/31/19	33/10/8	NS
LVEF (%) <sup>‡</sup>	56 ± 9.9	55 ± 14.5	54 ± 20.1	NS
LVEDP (mmHg) <sup>§</sup>	19 ± 6.2	20 ± 8.7	19 ± 8.0	NS

\* : Total number of the risk factors, <sup>†</sup>UA : unstable angina, AMI : acute myocardial infarction, SA : stable angina, <sup>‡</sup>LVEF : left ventricular ejection fraction, <sup>§</sup>LVEDP : left ventricular end-diastolic pressure, NS : not significant



**Fig. 1.** Treatment modalities for left main disease were CABG (coronary artery bypass graft surgery, n = 141), medical treatment (n = 67) and stent implantation (n = 16). CABG : coronary artery bypass graft surgery.

(49 ± 9.8 vs. 62 ± 9.7, p < 0.01) 가 (74% vs. 22%, p < 0.01) 가 (0.7 ± 1.11 vs. 1.6 ± 0.89, p < 0.01).

가 (Table 3). , 가 , 3 , , (Table 4).

#### 치료경향

141 (63%), 가 67 (30%), 16 (7%) (Fig. 1). 67 가 18 가 10 (15%), 가 3 (4%), 50% 가 가 11 (16%) . 11 50% 65% 53 ± 5.2% 16 15 (94%)

47 34% 1980 1995 15 0.9% 4 가 (p < 0.001), 가 (Table 2).

67%(16/24) 34%(16/47) (p = 0.01).

병변의 위치에 따른 임상양상 및 혈액학적 소견

가 1 . 14 가

2 (14%) . 3

고 찰 가 . 가

,<sup>18)19)</sup>

3 10% .

,<sup>1-3)</sup> 1 가

3% .<sup>11)13)</sup> 4 가

3.3% , 가

가

, 1980 1995 15

0.9% 19

가 가 . 가

가

. 1970

가 Cohen<sup>2)</sup> Takaro<sup>20)</sup>

가 48

(21%) . 가

가 ,

O'Keefe<sup>4)</sup>

(unprotected left main)

3 36%

, 1970 Gruenzig<sup>5)</sup>

가

0.05%

14 - 17) 0.1%

13)18) 0.28%

가

14 - 17)

Park<sup>6)</sup> 42

100% , 22%

가 97.5% 1

가

7 - 10)

7%가

49±9.8 15

(74%) (0.7±

1.11 )가 ,

14% . Baim<sup>1)</sup>

결 과 :

가 1995 3.3%(n=224) 1980 0.9% 가 (p< 0.001). 0.28% 가 . 가 (p<0.01). 가 . 11 50% 가 50% 65%( 53±5.2%) 가 (50 3 59%) 21) Abizaid 22) 가 141 (63%) 가 16 (7%) 16 15 (94%) 14 2 (14%) .

결 론 :

4 15 가 가 가 가 .

## 요 약

중심 단어 :

연구목적 :

대상 및 방법 :

1996 1999 4 50% 15 .

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