

## 심장판막질환에서 관상동맥협착의 빈도

김용석 · 최진오 · 황의석 · 이명묵 · 채인호 · 김철호  
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### The Incidence of Coronary Artery Stenosis in Patients with Valvular Heart Disease

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#### ABSTRACT

**Background and Objectives :** This study was performed in order to assess the incidence of coronary artery stenosis in patients with valvular heart disease (VHD) in Korea and its correlation with coronary risk factors and to investigate the need for coronary angiography in this subgroup of patients with VHD before surgery. **Subjects and Methods :** Patients with rheumatic mitral VHD (n = 375) and isolated aortic VHD (n = 187) who underwent cardiac catheterization and coronary angiography at Seoul National University Hospital between January, 1991 and December, 2000 were enrolled in the study. Significant coronary artery stenosis on angiography was defined as stenosis of more than 50% of the luminal diameter. In each patient the presence of the following coronary risk factors were recorded : smoking, diabetes mellitus, hypertension and total cholesterol concentration. **Results :** In patients with rheumatic mitral VHD, the incidence of significant coronary artery stenosis was 5.6% and was correlated significantly with age, hypertension and smoking. Significant coronary artery stenosis was not found in patients below 50 years of age. In patients with isolated aortic VHD, the incidence of significant coronary artery stenosis was 9.1% and was correlated significantly with age. Significant coronary artery stenosis was not found in patients below 45 years of age. **Conclusion :** The incidence of coronary artery stenosis in VHD was very low and showed a general distribution in older ages in Korea. These results suggest that coronary angiography, a routine evaluation before valve surgery in younger patients who have neither risk factors nor angina pectoris, should be performed selectively in patients older than 45 years with consideration of the cost and risk of the procedure. (Korean Circulation J 2001;31(11):1142-1149)

**KEY WORDS :** Stent · Coronary artery disease · Intravascular ultrasound.

## 서 론

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1)2)

가

3)

가 20 40%

2.0 cm<sup>2</sup>

가

2.8%

가

4) 가 , 10

50%

가 가

가

10

SPSS for Windows ver. 10.0(SPSS Inc.)

Student's t - test

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가

## 대상 및 방법

1991 1 2000 12

## 결 과

가 375  
(isolated aortic valvular heart disease)

가 187

2.0 cm<sup>2</sup>

, 2

류마티스성 승모판막질환 환자군에서의 관상동맥협착

Table 1

137 (36.5%),

375

238 (63.5%)

53 ± 8( :

**Table 1.** Clinical characteristics of the study population and comparison of risk factors between rheumatic mitral valvular heart disease and isolated aortic valvular heart disease

		RMVHD			IAVHD			p*
		M	F	T	M	F	T	
N		137	238	375	125	62	187	
Age		53 ± 8	53 ± 9	53 ± 8	55 ± 12	56 ± 12	56 ± 12	<0.05
Sex (M, %)				36.5			66.8	<0.05
HTN	( - )	126	219	345	98	51	149	<0.05
	( + )	8	14	22	26	8	34	
DM	( - )	127	223	350	112	57	169	NS
	( + )	8	10	18	12	2	14	
SM	( - )	57	193	250	56	39	95	<0.05
	( + )	45	2	47	48	0	48	
HC	( - )	131	214	345	113	55	168	NS
	( + )	5	17	22	8	4	12	
CAS (%)		6.6	5.0	5.6	11.2	4.8	9.1	NS

RMVHD : rheumatic mitral valvular heart disease, IAVHD : isolated aortic valvular heart disease, N : number of patients, M : male, F : female, T : total, HTN : hypertension, DM : diabetes mellitus, SM : smoking, HC : hypercholesterolemia, CAS : significant coronary artery stenosis, NS : not significant, \* : total RMVHD vs total IAVHD

**Table 2.** Incidence of significant coronary artery stenosis by age and sex in patients with rheumatic mitral valvular heart disease

Age	Male (%)	Female (%)	Total (%)
44	0/ 22 (0)	0/ 37 (0)	0/ 59 (0)
45 - 49	0/ 24 (0)	0/ 48 (0)	0/ 72 (0)
50 - 54	2/ 29 ( 6.9)	1/ 49 ( 2.0)	3/ 78 ( 3.8)
55 - 59	3/ 31 ( 9.7)	3/ 46 ( 6.5)	6/ 77 ( 7.8)
60 - 64	3/ 21 (14.3)	3/ 34 ( 8.8)	6/ 55 (10.9)
65	1/ 10 (10.0)	5/ 24 (20.8)	6/ 34 (17.6)
Total	9/137 ( 6.6)	12/238 ( 5.0)	21/375 ( 5.6)

**Table 3.** Multivariate logistic regression analysis of the coronary risk factors for significant coronary artery stenosis in rheumatic mitral valvular heart disease

Variable	Odds ratio	95% C.I. for Exp (B)		p
		Lower	Upper	
Age	1.128	1.044	1.220	0.002
Sex	1.082	0.240	4.890	0.918
HTN	6.679	1.630	27.365	0.008
DM	0.688	0.066	7.144	0.754
SM	4.290	1.114	16.521	0.034
HC	2.874	0.519	15.930	0.227

HTN : hypertension, DM : diabetes mellitus, SM : smoking, HC : hypercholesterolemia

30 73) , 53 ± 8(36 71) , 53 ± 9  
(30 73)

가 297 47 (15.8%)

368 18 (4.9%)

367 22 (6.0%)

367 22 (6.0%)

240 mg/dL

137 9 (6.6%),

238 12 (5.0%), 375

21 (5.6%)

가

.

50

가

Table 1

187

, 50 54 3.8%, 55 59  
7.8%, 60 64 10.9%,  
65 17.6% (Ta-  
ble 2).

(multiple logistic re-  
gression analysis)  
(Table 3).

고립성 대동맥판막질환 환자군에서의 관상동맥협착

125 (66.8%), 62 (33.2%)  
 $56 \pm 12$  ( : 19  
 83) ,  $55 \pm 12$  (19 80) ,  $56 \pm 12$  (28  
 83)  
 가 143 48 (33.6%)  
 183 14 (7.7%)  
 , 183 34 (18.6%)  
 180 12 (6.7%) 240  
 mg/dL  
 $125$  14 (11.  
 2%), 62 3 (4.8%) ,  
 187 17 (9.1%)  
 가  
 44 가  
 , 45 49 10.5%, 50 54  
 0%, 55 59 9.1%, 60  
 64 5.3%, 65  
 26.3% (Table 4).

(Table 5).

류마티스성 승모판막질환군과 고립성 대동맥판막질환군  
 의 비교

, ,  
 (Table 1).  
 $53 \pm 8$  ,  
 $56 \pm 12$   
 (p<0.05).  
 36.5% ,  
 66.8%  
 (p<0.05).  
 , (18.6%)  
 (6.0%)  
 (p<0.05).  
 (37.5%) (16.3%)  
 (p<0.05).

**Table 4.** Incidence of significant coronary artery stenosis by age and sex in patients with isolated aortic valvular heart disease

Age	Male (%)	Female (%)	Total (%)
44	0/ 19 (0)	0/13 (0)	0/ 32 (0)
45 - 49	2/ 16 (12.5)	0/ 3 (0)	0/ 19 (10.5)
50 - 54	0/ 17 (0)	0/10 (0)	0/ 27 (0)
55 - 59	3/ 24 (12.5)	0/ 9 (0)	3/ 33 ( 9.1)
60 - 64	1/ 25 ( 4.0)	1/13 ( 7.7)	2/ 38 ( 5.3)
65	8/ 24 (33.3)	2/14 (14.3)	10/ 38 (26.3)
Total	14/125 (11.2)	3/62 ( 4.8)	17/187 ( 9.1)

**Table 5.** Multivariate logistic regression analysis of the coronary risk factors for significant coronary artery stenosis in isolated aortic valvular heart disease

Variable	Odds ratio	95% C.I. for Exp (B)		p
		Lower	Upper	
Age	1.119	1.044	1.200	0.001
Sex	0.427	0.069	2.663	0.363
HTN	1.502	0.404	5.584	0.544
DM	1.938	0.428	8.776	0.391
SM	2.016	0.535	7.589	0.300
HC	0.791	0.070	8.880	0.849

HTN : hypertension, DM : diabetes mellitus, SM : smoking, HC : hypercholesterolemia

7.7%,  
 4.9% , 가 240  
 mg/dL  
 6.7%, 6.0%  
 5.6%,  
 9.1%

고 찰

,<sup>1)2)</sup> 가  
 ,<sup>5)</sup> 가





## 요 약

배경 및 목적 :

방 법 :

1991 1 2000 12

375

187

50%

결 과 :

6.6%, 5.0%, 5.6% , 50

가

11.2%, 4.

8%, 9.1% , 45

결 론 :

가

45

중심 단어 :

;

;

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