

## 정상 관동맥조영술 소견을 보인 흉통환자에서 테크 네슘 심근관류 SPECT 소견 분석\*

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= Abstract =

### Tc-99m Myocardial Perfusion SPECT Findings of Angina Patients Showing Normal Coronary Angiography

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**Background** : Tc-99m myocardial perfusion imaging agents have recently found wide spread use as detecting agents of coronary diseases. Unfortunately, false positive results are not infrequent.

**Methods** : We analyzed Tc-99m myocardial perfusion SPECT(Tc-SPECT) findings in angina patients showing normal coronary angiography. Seventy patients who underwent myocardial SPECT within one month of coronary angiography which revealed no significant stenosis were studied.

**Results** : Forty six (65.7%) patients showed perfusion defects on Tc-SPECT. Eighteen were due to soft tissue attenuation, thirteen were due to technical problems such as low count rate, six were associated with intraventricular conduction abnormalities, four with coronary spasms, three with old infarctions, and one with slow coronary flow.

**Conclusion** : Photon attenuation and inadequate count rates were the main causes of false positive results on myocardial SPECT imaging with Tc-99m agents. However, pathological conditions such as conduction disturbance, coronary spasm or slow coronary flow were also associated with positive SPECT findings in patients with normal coronary angiograms.

**KEY WORDS** : Tc-99m myocardial SPECT · Normal coronary angiography.

서 론 SPECT가 T1 - 201 가 가

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#### 4. 통계분석

test , 가 가  
chi square test  
ANOVA  
p 0.05

#### 결 과

70 46 (65.7%)  
가 14 (30.4%), 가 32(69.6%)  
가  
11 (23.9%), 가 7 (15.2%),  
5 (10.9%), 1  
(2.2%), Q 가 4 (8.7%),

가 가 5 (10.9%),  
가 13 (28.3%)  
(Table 1),

가 5 ,  
2 , 1 , Q 가 가 2 ,  
가 가 3 ,  
가 1  
가 11 , 가 2 ,  
3 , Q 가 가 2 ,  
가 가 10 ,  
4 , 가

11 가  
(p=0.001),  
가 (p>0.05).

(Table 2), LAD

( ) 27 가 , LCx  
( ) RCA ( ) 16 , 17  
. 32

, 14

가 ,

**Table 1.** Causes of false positive results on Tc-99m myocardial perfusion SPECT according to sex

	Male	Female	Difference
Breast attenuation	0	11	0.001
Diaphragmatic attenuation	5	2	NS
LBBB	2	3	NS
RBBB	1	0	NS
Q wave infarct	2	2	NS
Coronary artery spasm	0	4	NS
Slow flow	1	0	NS
Inadequate count	3	10	NS
Sum	14	32	NS

LBBB : left bundle branch block  
RBBB : right bundle branch block  
NS : not significant

**Table 2.** Causes of false positive results on Tc-99m myocardial perfusion SPECT according to coronary arterial branches

	LAD	LCx	RCA	Difference
Breast attenuation	10	3	0	0.017
Diaphragm	0	2	6	0.002
LBBB	5	0	0	0.039
RBBB	1	0	0	NS
Q wave infarction	2	3	1	NS
Coronary artery spasm	0	2	3	NS
Slow flow	0	1	0	NS
Inadequate count	9	5	7	NS
Sum	27	16	17	0.038

LBBB : left bundle branch block  
RBBB : right bundle branch block  
NS : not significant

가 .

#### 고 찰

SPECT

가

ECT  
75%, 10%  
Vaduganathan  
13) 383  
SPECT  
7) (patient referral bias)  
SPECT 가  
81%, 85%,  
80%, 90% 36%, 51%  
가  
SPECT  
가  
69.6%(32/46) 가  
34.4%(11/32)가  
30.4%(14/46)  
35.7%(5/14)  
SPECT  
8,9)  
LAD 10 , LCx 3  
가 2 LAD LCx  
가  
9), RCA  
6 , LCx 2 가 , 1  
RCA LCx 가  
DePuey 10) SPECT  
80%, 92%  
Kugiyama 16)  
19  
SPECT  
SPECT 가  
ECT 4 가  
SP -  
가  
10 - 22) DePuey 12)  
14 SP - 가



## 요 약

SPECT

SPECT

70 ( : = 31 : 39,

53 ± 21 )

1

70 46 (65.7%)

가 14 , 가 32

27 가

16 가

가 18

(39.1%), Q

가 15 (32.6%), 가 13

(28.3%)

SPECT

가

가

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