

불안정형 협심증 환자에서 관상동맥중재술 후 Interleukin-6의 변화

김성은 · 전성희 · 박시훈

The Level of Interleukin-6 in Coronary Sinus and Peripheral Blood in Patients with Unstable Angina Following Coronary Intervention

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ABSTRACT

Background : It has not been completely understood whether acute phase responses of unstable angina result from a disruption of coronary plaques or from an instability & hypersensitivity of the plaque itself. Plasma IL-6 can be affected by several systemic factors, so it is difficult to conclude that IL-6 level in the peripheral blood always reflects the level of the coronary sinus blood. **Methods :** We measured the IL-6 level in coronary sinus blood and peripheral blood of 14 patients (11 men, 3 women, mean age 55 ± 6 years, range 43 to 65 years) with unstable angina before, and 4, 8, 16, 24, and 36 hours after undergoing percutaneous coronary intervention (PCI), respectively. **Results :** A statistically significant increase of all IL-6 levels in both coronary sinus blood and peripheral blood following PCI was noted. There was also a correlation between IL-6 levels in coronary sinus blood and peripheral blood following PCI (correlation coefficient $r = 0.416$, $p = 0.01$), although the difference of the concentration of IL-6 between coronary sinus blood and peripheral blood following PCI was increased as time passed. There was no statistically significant relationship between the number of coronary lesions treated with PCI and the amount of elevation of plasma IL-6 level. **Conclusion :** It is difficult to infer that the IL-6 level in peripheral blood exactly reflects the level found in the coronary sinus blood and the plaque rupture induced by PCI is the main cause of the elevated plasma IL-6. (**Korean Circulation J 2001;31(8):773-779**)

KEY WORDS : Unstable angina · Interleukin-6 · Coronary sinus · Plaque.

서 론

가¹⁾

Interleukin - 6(IL - 6), C - reac -
tive protein(CRP), serum amyloid A(SAA)
(acute phase reactant)

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11 , 3)가
가 가
IL - 6 가 가 C - reactive protein , ESR,
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IL - 6 가 가 ,⁴⁾ 가 IL - 6 가
Hojo ⁵⁾ IL - 6 , 가 (5
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ride), (hypoperfusion), 방 법
가
가
IL - 6
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4, 8, 16, 24, 36
IL -
6 IL - 6 IL - 6
IL - 6 가
가 ⁴⁾ EDTA 1
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- 70 IL - 6

대상 및 방법

IL - 6
- 70 Quantikine human
IL - 6 Immunoassay(R & D system, Minneapolis,
MN) ELISA IL - 6
60
Braunwald IIIB ⁶⁾ 25
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edman test
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correlation
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결 과

대상 환자의 임상적 특징

55 (43 65)
11 : 3
24
T
가
50%
가
10 5
가
5000
(verapamil),
(nitrate)가
가
TIMI grade 3
가
12
가
(Ta -
ble 1). ACC/AHA
lesion speicific cha -
racteristics type B₂ - C lesion
가
3 가
4 ,

중재시술 전후 관상동과 말초 혈액에서 IL-6의 농도 변화
IL - 6
(Fig. 1).

IL - 6 가 가
IL - 6

Table 1. Clinical characteristics, angiographic findings and procedural variables

	Unstable angina (n = 14)
Age (years)	55 ± 6
Sex (M/F)	11/3
Risk factor	
Family history of coronary heart disease	2 (14%)
Hypercholesterolemia	10 (71%)
Diabetes mellitus	3 (21%)
Hypertension	10 (71%)
Smoking	10 (71%)
Medication	
Oral nitrates	10 (71%)
Calcium antagonists	9 (64%)
ACE inhibitors	1 (7%)
Lipid lowering agents	7 (50%)
-Blocker	12 (86%)
Aspirin	14 (100%)
Ticlopidine	14 (100%)
Angiographic findings	
Dilated vessel	
LAD (proximal/mid/distal)	12 (9/3/0)
LCx (proximal/mid/distal)	2 (0/0/2)
RCA (proximal/mid/distal)	6 (2/4/0)
Number of diseased vessels	1.9 ± 0.9
Number of dilated site	1.4 ± 0.6
Intracoronary thrombosis	2 (14%)
Type B ₂ -C lesion (ACC/AHA)	7 (50%)
Procedural variables	
Balloon inflations, n	2.9 ± 0.9
Total inflation times, s	84.3 ± 29
Maximum inflation pressure, atm	10.7 ± 1.7
Complication, n (%)	4 (29)
Stent, n (%)	12 (86)

ACE inhibitors indicates Angiotensin Converting Enzyme inhibitors, ACC/AHA : American College of Cardiology/ American Heart Association

24 18.10 pg/ml
7.05 pg/ml 24

중재시술 후 관상동 혈액과 말초 혈액 내 IL-6 농도간
의 상관관계

IL - 6 가 IL -

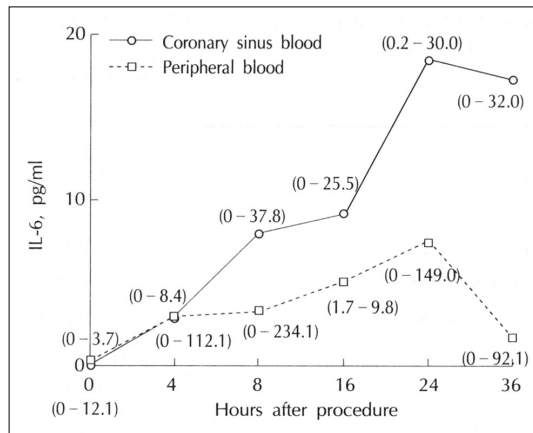


Fig. 1. Changes in plasma levels of IL-6 after PTCA.

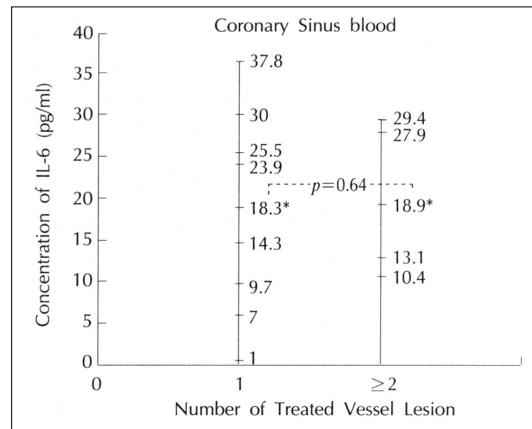


Fig. 3. Changes in the peak level of IL-6 in Coronary sinus blood plasma according numbers of treated vessel lesions.

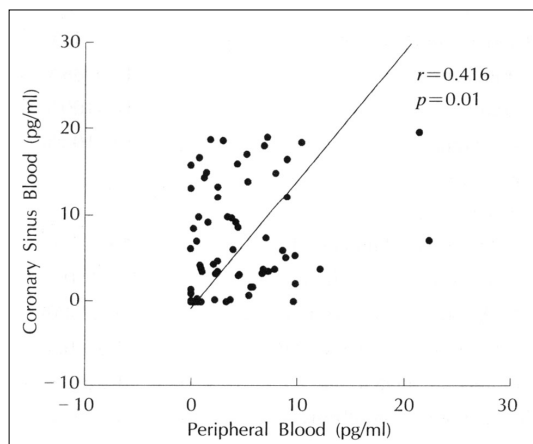


Fig. 2. Correlation between IL-6 levels in coronary sinus blood and peripheral blood after PTCA.

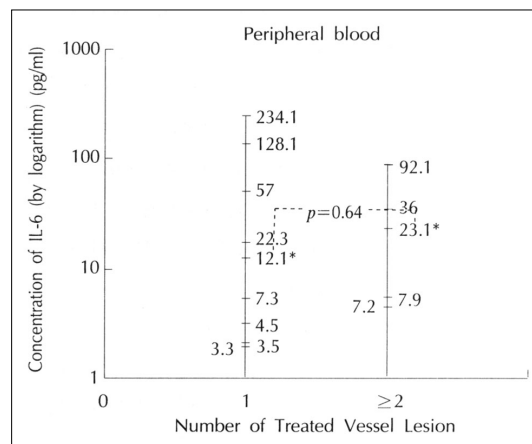


Fig. 4. Changes in the peak level of IL-6 in peripheral blood plasma according numbers of treated vessel lesions.

6 가 가 , IL -
6가 가
IL - 6 가
IL - 6 90
 $r=0.416(p=0.01)$
(Fig. 2).

시술한 병변의 수와 IL-6 최고치 사이의 관계
9 IL -
6 18.3 pg/ml ,
5 18.9 pg/ml
($p=0.64$).
가 IL - 6

12.1 pg/ml ,
23.1 pg/ml
가 ($p=0.74$)(Figs. 3 and 4).

고 찰

IL - 6 T , , , ,
가

.⁷⁾ IL - 6
CRP, SAA

(oxid -

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결 과 :

IL - 6 가 가 .

IL - 6 r = 0.416 (p = 0.01) ,

IL - 6 가 IL - 6 .

결 론 :

IL - 6 가 IL - 6 ,

가 IL - 6 가 .

중심 단어 : IL - 6 . . .

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