

경피적 관동맥확장술 후 재협착 유무에 따른 내피세포 기능의 차이

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Differential Endothelial Function According to the Presence of Restenosis in Patients Having Undergone Percutaneous Transluminal Coronary Angioplasty

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ABSTRACT

Background and Objectives : We undertook this study to determine whether there is any difference in endothelial function according to the presence of restenosis in patients who had undergone percutaneous transluminal coronary angioplasty (PTCA), although it is well known that endothelial dysfunction is present in patients with coronary artery disease. **Subjects and Methods :** The study population comprised 39 patients (mean age : 61 years old, male : 30 patients) who underwent PTCA a mean 12 months before follow-up coronary angiogram (CAG). We measured the flow-mediated brachial artery dilation (FMD) using high-resolution ultrasound 1 day before taking the follow-up CAG in an overnight fasting state. We also analyzed the risk factors of atherosclerosis, lipid and glucose levels, the presence of chest pain, and the types of drug taken by patients according to the presence of restenosis. **Results :** FMD was significantly lower in patients with restenosis ($n = 19$) than without restenosis ($7.5 \pm 3.7\%$ vs $10.2 \pm 2.5\%$, $p = 0.013$). However, there were no significant differences in other variables according to the presence of restenosis. **Conclusion :** Endothelial dysfunction was more pronounced in patients with restenosis than without restenosis following PTCA. However, we do not yet know whether the severity of endothelial dysfunction is a predictor for restenosis as the FMD was taken just prior to the follow-up coronary angiogram. (**Korean Circulation J 2001;31(11):1117-1122**)

KEY WORDS : Endothelium, vascular ; Angioplasty, transluminal, percutaneous coronary ; Restenosis.

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 (Table 1).

통계 처리

p 0.05

SPSS 7.5 Mann - Whitney U test

Chi - square test

multiple logistic regression analysis

Table 1. Baseline characteristics of study patients

| | No restenosis (n=19) | Stenosis (n=20) | p |
|------------------------------|-------------------------|--------------------|-------|
| Age, y | 61.6 ± 7.5 | 59.7 ± 7.8 | 0.35 |
| Male sex, n | 17 | 13 | 0.12 |
| Chest pain | 10 | 7 | 0.34 |
| Hypertension | 7 | 6 | 0.74 |
| Diabetes mellitus | 1 | 4 | 0.34 |
| Blood level, fasting | | | |
| Glucose | 95.2 ± 23.1 | 104.0 ± 23.1 | 0.14 |
| Cholesterol | 180.21 ± 30.75 | 197.00 ± 27.67 | 0.06 |
| Current smoker | 11 | 10 | 0.75 |
| Vessel dilated | | | |
| RCA | 9 | 5 | |
| LAD | 7 | 10 | |
| LCX | 3 | 5 | 0.34 |
| Heart rate, bpm | 67.6 ± 5.1 | 69.9 ± 6.7 | 0.21 |
| Ejection fraction, % | 63.9 ± 15.9 | 63.2 ± 12.9 | 0.79 |
| Medication, n | | | |
| ACE inhibitor | 7 | 7 | 0.91 |
| Calcium channel blocker | 16 | 16 | 0.30 |
| Lipid lowering agent | 5 | 5 | 0.44 |
| Endothelial function test | | | |
| Basal diameter, mm | 4.72 ± 0.80 | 4.71 ± 0.59 | 0.96 |
| Hyperemic diameter, mm | 5.07 ± 0.83 | 5.18 ± 0.61 | 0.49 |
| FMD, % | 7.5 ± 3.7 | 10.2 ± 2.5 | 0.013 |

1119

Table 2. Multiple adjusted OR of restenosis after PTCA according to flow mediated dilation of artery

| | No. of patients | Case of restenosis | % | Multiple adjusted OR |
|---------------------------|-----------------|--------------------|------|-------------------------|
| FMD | | | | |
| Group 1 (2.95 - 9.10) | 19 | 13 | 68.4 | 16.1 (1.35 - 191.31) |
| Group 2 (9.11 - 17.07) | 20 | 6 | 30.0 | 1.00 |
| p | | | | 0.02 |

OR : odd ratio adjusted for age, smoking habits (current smokers or nonsmokers), hypertension (yes or no), ejection fraction, sex, diabetes mellitus (yes or no), and hyperlipidemia (yes or no), PTCA : percutaneous transluminal coronary angioplasty, FMD : flow mediated dilatation of artery

재협착 유무에 따른 내피세포 기능

4.72 ± 0.79 mm, 4.71 ± 0.59 mm

7.5 ± 3.7%

10.2 ± 2.5%

(p = 0.013)

multiple logistic regression analysis

multiple logistic regression analysis

Odd ratio가 16.1

(p = 0.02) (Table 2).

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endothelial dysfunction

7) -adrenergic blocking agents

8)

linsidomine molsidomine

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10)

angiotensin converting enzyme inhibitor,

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가 가

가 30%

11 - 13)

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가

30

50% stent 20 30%
14) 60%,

41.7% 가 가 가

7.5±3.7%, 10.2±2.5%

방 법 :

39

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결 과 :

39 19

15)16)

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(7.5±3.7%
vs 10.2±2.5, p=0.013).

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multiple logistic regres -
sion analysis odd ratio가 16.1

결 론 :

stent

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중심 단어 : ; ;

요 약

배경 및 목적 :

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