

Fever after Percutaneous Coronary Intervention in Patients with Acute Myocardial Infarction

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Background/Aims: Rates of fever complicating percutaneous coronary intervention (PCI) are very low. However, little is known about cause that developing fever after PCI. Therefore, this study aimed to determine the clinical characteristics developing fever after PCI in patients with acute myocardial infarction (AMI). **Methods:** 88 patients with fever after undergoing PCI due to AMI were defined as the study group. The age- and sex-matched control group was defined as patients without fever after undergoing PCI due to AMI. We detected bacteremia and other infections by reviewing the list of positive for any culture studies. **Results:** The study group showed faster heart rates (80.6 ± 22.2 vs. 73.5 ± 19.0 bpm, $p < 0.05$), higher white blood cell (WBC) count (11298.9 ± 4.5 vs. 9822.7 ± 3.2 /ul, $p < 0.05$), higher high sensitivity C-reactive protein (hs-CRP) (2.9 ± 6.5 vs. 0.4 ± 1.1 mg/L, $p < 0.05$), higher Troponin-T level (0.8 ± 1.4 vs. 0.2 ± 0.4 ng/mL, $p < 0.05$) and longer time to PCI (63.8 ± 23.7 vs. 56.0 ± 21.0 minutes, $p < 0.05$) than control group. Independent risk factors for developing fever after PCI were performed longer time to PCI (odds ratio (OR) 1.04, $p = 0.002$), endotracheal intubation (OR 12.92, $p = 0.013$), WBC count (OR 1.20, $p = 0.007$) and hs-CRP (OR 1.66, $p = 0.025$). Total 25 patients (28.4%) in study group had 28 positive in any culture; 9 patients in only blood, 5 patients in only urine, 5 patients in only sputum, 1 patient in central line removal site, 1 patient in wound, 1 patient in blood and urine, 1 patient in blood and sore, 1 patient in sputum and wound. Most commonly identified organism was Staphylococcus group in blood culture. Risk factors for positive any culture in study group were placement of central venous catheter (OR 6.38, $p = 0.001$). **Conclusions:** Developing fever after PCI in patients with AMI was associated with presence of dyspnea at admission, markers of inflammation and longer time to PCI.

Table 1. Risk factors for developing fever after PCI in patients with acute myocardial infarction

Risk factors	OR	95% CI	p Value
Time to PCI	1.04	1.02-1.07	0.002
Endotracheal intubation	12.92	1.60-104.54	0.013
WBC	1.20	1.05-1.38	0.007
hs-CRP	1.66	1.06-2.59	0.025

OR; odds ratio, CI; confidence interval, PCI; percutaneous coronary intervention, WBC; white blood cell, hs-CRP; high sensitivity C-reactive protein

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