

## **Intensity of Statin Treatment in Patients with Acute Myocardial Infarction and Very Low LDL Cholesterol**

**Doo Sun SIM<sup>1</sup>, Myung Ho JEONG<sup>1\*</sup>, Hyo Soo KIM<sup>2</sup>, Hyeon Cheol GWON<sup>3</sup>, Ki Bae SEUNG<sup>4</sup>, on behalf of the KAMIR-NIH investigators**

<sup>1</sup>Department of cardiology, Chonnam National University Hospital, Gwanjgu, Korea, <sup>2</sup>Department of cardiology, Seoul National University Hospital, Seoul, Korea, <sup>3</sup>Department of cardiology, Sungkyunkwan University, Seoul Samsung Medical Center, Seoul, Korea, <sup>4</sup>Department of cardiology, The Catholic University of Korea

*myungho@chollian.net*

### **Abstract**

**Objective:** For patients with acute myocardial infarction (MI) whose baseline low-density lipoprotein (LDL) cholesterol levels are very low, there is a paucity of data regarding the intensity of statin therapy. We sought to assess the impact of statin intensity in patients with acute MI and LDL cholesterol <70 mg/dL.

**Methods:** A total of 1,086 patients with acute MI and baseline LDL cholesterol <70 mg/dL from the Korea Acute Myocardial Infarction Registry-National Institute of Health database were divided into less intensive statin (expected LDL reduction <40%, n = 302) and more intensive statin (expected LDL lowering ≥40%, n = 784) groups. The primary endpoint was major adverse cardiac and cerebrovascular events (MACCE), a composite of cardiac death, MI, revascularization occurring at least 30 days after admission, or stroke, at 12 months.

**Results:** After 1:2 propensity matching, there were no differences between less intensive (n = 302) and more intensive stain (n = 604) groups in the incidences of cardiac death (0.3% vs. 0.3%) and hemorrhagic stroke (0.3% vs. 0.5%, p = 0.727) at 12 months. Compared to less intensive statin group, more intensive statin group showed lower target-vessel revascularization (4.6% vs. 1.8%, p = 0.027) and MACCE (11.6% vs. 7.0%, p = 0.021). Major bleeding was not different between less intensive and more intensive groups (1.0% vs. 2.6%, p = 0.118).

**Conclusion:** More intensive compared to less intensive statin therapy was associated with significantly lower major adverse cardiovascular events in patients with acute MI and very low LDL cholesterol.

### **Keywords**

*Cholesterol; Myocardial Infarction; Statins*