

Summary

The Diagnostic Value for Ischemic Heart Disease of Thallium-201 Myocardial Scintigraphy by Intravenous Infusion of SUNY4001 (Adenosine) —The Report of Clinical Trial at Multi-Center: Phase III—

Junichi YAMAZAKI*^{1,†}, Tsunehiko NISHIMURA*², Shigeyuki NISHIMURA*³,
Teishi KAJIYA*⁴, Kazuhisa KODAMA*⁵ and Kazuzo KATO*^{6,‡}

†: Author ‡: Chairman

*¹First Department of Internal Medicine, Toho University School of Medicine

*²Division of Tracer Kinetics, Biomedical Research Center, Osaka University School of Medicine
(current position: Department of Radiology, Kyoto Prefectural University of Medicine)

*³Department of Cardiology, Yokohama Rosai Hospital
(current position: Second Department of Internal Medicine, Saitama University of Medicine)

*⁴Department of Cardiology, Himeji Cardiovascular Center

*⁵Department of Cardiology, Osaka Police Hospital

*⁶Cardiovascular Institute

With two hundreds and seven patients unable to exercise adequately, the diagnostic accuracy and adverse reaction of ²⁰¹Tl myocardial scintigraphy with the pharmacologic stress by SUNY4001 (adenosine) infusion were studied.

Adenosine was infused for six minutes at the rate of 120 µg/kg/min, and then ²⁰¹Tl was injected after three minutes from the start of infusion. The early and delayed images were obtained by SPECT imaging. According to angiography, AHA 90% stenosis was defined as significant.

The sensitivity of detecting coronary artery disease was 87.1% and the specificity was 46.0%.

Adverse reactions occurred in 66.7% of the pa-

tients, most of which disappeared shortly with no need for treatment.

Major adverse reactions were chest pain/discomfort (30.4%), flushing/feeling of warmth (22.4%) and blood pressure decrease (17.4%).

Adenosine infusion caused slight decrease in blood pressure and increase in heart rate. These hemodynamic changes were resolved within several minutes from the termination of adenosine infusion.

We concluded that adenosine-²⁰¹Tl imaging is safe and useful to detect coronary artery disease in patients unable to exercise adequately.

Key words: Adenosine, ²⁰¹Tl, SPECT, Diagnostic accuracy, Ischemic heart disease.