

Summary

A New Protocol of Dual Energy Acquisition on Stress ^{201}Tl and Rest $^{99\text{m}}\text{Tc}$ -Tetrofosmin Myocardial Scintigraphy

Masakazu MAENO*, Takeshi MATSUO*, Takurou IMAMURA*, Yasushi KOIWAYA*,
Tanenao ETO*, Shigeki NAGAMACHI** and Seishi JINNOUCHI**

**First Department of Internal Medicine, Miyazaki Medical College*

***Department of Radiology, Miyazaki Medical College*

We carried out stress ^{201}Tl (Tl) and rest $^{99\text{m}}\text{Tc}$ -tetrofosmin (TF) myocardial scintigraphy with dual energy acquisition in 24 patients with suspected ischemic heart disease performed coronary arteriography and elucidated the sensitivity of this method. One hour after light meal eating, TF (555 MBq) was injected intravenously at rest and after 3 minutes from injection of TF exercise or pharmacologic stress was performed. During stress Tl (111 MBq) was injected intravenously before end-point or at adequate point of pharmacologic stress. Dual energy acquisition using triple energy windows (TEW) was started after 5 minutes (early) and 4 hours (delayed) from stress. The

sensitivity (Sn), specificity (Sp) and accuracy (Ac) in diagnosis of non-infarcted branches by using Tl (early)-TF (rest) and Tl (early)-Tl (delayed) were 79% vs. 53% (Sn), 78% vs. 96% (Sp) and 79% vs. 71% (Ac) respectively. Accordance of uptake score of infarcted region between TF (rest) and Tl (delayed) was 70%. In conclusion, this protocol is seemed to be useful as usual protocol for detection of myocardial ischemia and viability during about only 1 hour.

Key words: Ischemic heart disease, Stress ^{201}Tl myocardial scintigraphy, Rest $^{99\text{m}}\text{Tc}$ -tetrofosmin scintigraphy, Dual energy acquisition.