Timing of Thallium Injection during Dobutamine Imaging

TO THE EDITOR: I would like to draw your attention to a significant error that appears in a special contribution article written by Dr. Mario S. Verani (*1*). The error occurs in the second sentence of the "protocol" section, in which Dr. Verani describes the timing used for the injection of ^{201}Tl during a dobutamine myocardial perfusion study.

The statement made is: "Thallium-201 is injected 1 min after starting the *first* dose of dobutamine..." According to Dr. Verani (personal communication), this statement should read, "Thallium-201 is injected 1 min after starting the *highest* dose of dobutamine..."

Because this is one of the few articles describing a dobutamine protocol in detail and the article is a "Special Contribution," which places it in a special class of *Journal* papers, I think it is important to point out this error, lest someone mistakenly applies it in his/her own work.

REFERENCE

1. Verani MS. Dobutamine myocardial perfusion imaging. *J Nucl Med* 1994;35:737–739.

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REPLY: I am grateful to Mr. Dawry for identifying an inadvertent printing mistake in my manuscript. Mr. Dawry is correct in that the radioactive tracer (^{201}Tl or one of the ^{99m}Tc perfusion agents) should be injected 1 min after starting the *highest* dose of dobutamine. I would only add that while we always try to attain a maximal dose of 40 μg/kg/min, the tracer should be injected at the maximal *tolerated* dose, even if it is less than the ideal maximal dose.

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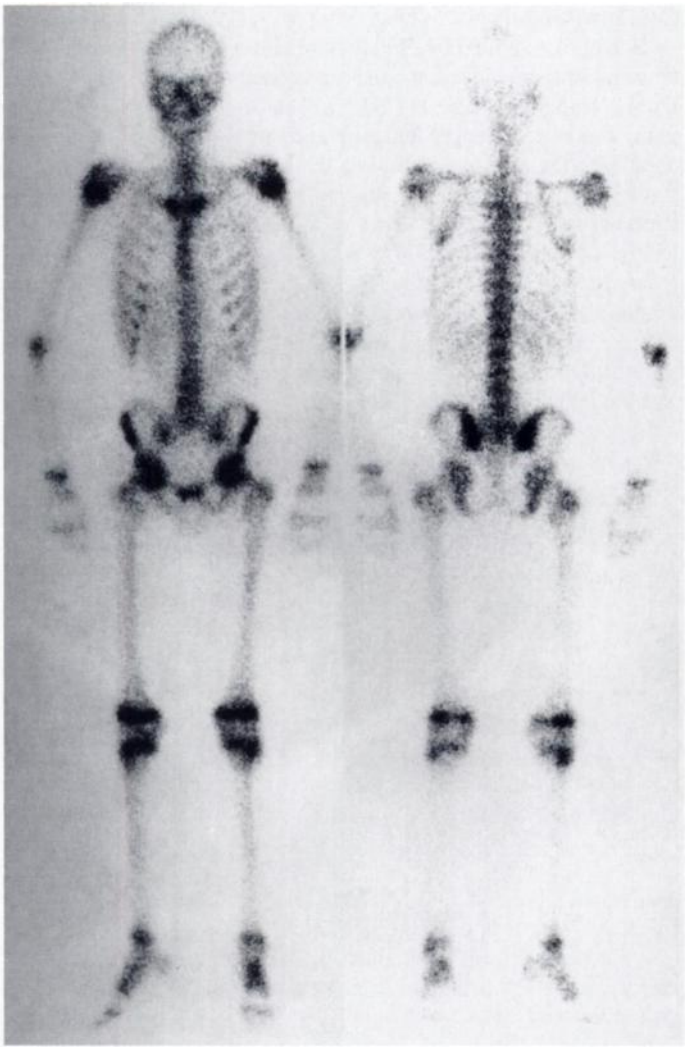

FIGURE 1. Gallium-67 scintigraphs of an 18-yr-old man with non-Hodgkin's lymphoma.

Gallium Bone Scintigraphy

TO THE EDITOR: The article by Sohn et al. on the biodistribution of ^{67}Ga in normal and hypotransferrinemic tumor-bearing mice attracted our attention (*1*). An additional case description in support of the hypothesis of transferrin-independent uptake of gallium by bone is described below.

Gallium scintigrams were obtained 72 hr after injection of 259 MBq ^{67}Ga in an 18-yr-old man with a large-cell anaplastic Ki-1 expressing non-Hodgkin's lymphoma as a follow-up procedure. Over the last 6 mo, the patient had been treated with intensive chemotherapy and hematopoietic growth factors. During this time, he had received 4 units of packed cells because of severe chemotherapy-induced anemia; the last two had been given more than 4 mo before gallium scintigraphy (Fig. 1). Apart from slight activity in the liver, the scan looks very much like a bone scintigram. Kidney activity is very faint. Serum iron and iron-binding capacity, determined 2 days after scintigraphy, were 209 μg/dl and 214 μg/dl, respectively. Extreme saturation of transferrin was thus likely to be the cause of the altered ^{67}Ga biodistribution.

Similar cases have been published in which the iron-overload could be attributed to multiple transfusions given because of severe anemic conditions, including erythroblastosis fetalis (*3*), sickle cell anemia (*4*) and pancytopenia. (*2*)

REFERENCES

1. Sohn M-H, Jones BJ, Whiting JH, Datz FL, Lynch RE, Morton KA. Distribution of gallium-67 in normal and hypotransferrinemic tumor-bearing mice. *J Nucl Med* 1993;34:2135–2143.
2. Moreno AJ, Swaney JJ, Spicer MJ, Henry CD, Turnbull GL. The gallium-67 citrate bone scan. *Clin Nucl Med* 1985;10:594–595.
3. Edeburn GF, Treves ST. Gallium scan findings following multiple blood transfusions in an infant with erythroblastosis fetalis. *Clin Nucl Med* 1987;12:70.
4. Loesberg AC, Martin WB. Altered biodistribution of Ga-67 citrate in an iron-overloaded patient with sickle cell disease. *Clin Nucl Med* 1994;19:157–159.

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