

**FIGURE 1**Twenty-four-hour anterior image of the pelvis demonstrating activity along the right femoropopliteal graft.

labeled leukocytes (11), and it most likely accounts for the false-positive scan in this patient. In the second patient with a false-positive scan, angiography demonstrated a thrombosed graft which was placed 3 yr prior to scanning with no evidence of a pseudoaneurysm. A 20-wk clinical follow-up failed to demonstrate a graft infection and no definite cause for the positive scan was found

Pertinent details of the hospitalization of six patients treated with antibiotics and studied with <sup>111</sup>In-labeled leukocyte scans were irretrievable. Thus, they were excluded from the study. If these patients' data were included (1 positive and 1 negative scan without clinical correlation, 2 true-positive and 2 true-negative scans proven by surgery and clinical correlation, but lacking data concerning specific antibiotics or time of treatment), there would be 12 true-positive, 13 true-negative, 2 false-positive, 0 false-negative, and 2 undetermined data. Under the worst case scenario (two scans without

clinical correlation assumed to be a false-positive and a false-negative scan), the resultant sensitivity and specificity would be 92% and 81%, respectively. Comparison of this sensitivity and specificity with those of 100% and 85% after exclusion of the six patients show that the differences in sensitivity and specificity are not significant (p > 0.05).

Thus, in this small series of patients with synthetic vascular grafts who have received prior antibiotic therapy, neither the sensitivity nor the specificity of <sup>111</sup>Inlabeled leukocyte scan was adversely affected for detection of graft infection. As such, <sup>111</sup>In-labeled leukocyte scans remain a sensitive test for detection of synthetic vascular graft infection.

## REFERENCES

- Liekweg WG, Greenfield LJ. Vascular prosthetic infections: collected experience and results of treatment. Surg Annu 1977;81:335-342.
- Brunner MC, Mitchell RS, Baldwin JC, et al. Prosthetic graft infection: limitations of indium-white blood cell scanning. J Cardiovasc 1986;42:42-47.
- Forstrom LA, Dewanjeee MK, Chowdhury S, Brown ML. Indium-111-labeled purified granulocytes in the diagnosis of synthetic vascular graft infection. Clin Nucl Med 1988;13:859-862.
- Williamson MR, Boyd CM, Read RC, et al. Indium-111labeled leukocytes in the detection of prosthetic vascular graft infections. AJR 1986;147:173-176.
- Berridge DC, Earnshaw JJ, Frier M, et al. Indium-labeled leukocyte imaging in vascular graft infection. Br J Surg 1989;76:41-44.
- Serrota AI, Williams RA, Rose JG, Wilson SE. Uptake of radiolabeled leukocytes in prosthetic graft infection. Surg 1981;90(1):35-40.
- Knochel JQ, Koehler PR, Lee TG, Welch DM. Diagnosis of abdominal abscesses with computed tomography, ultrasound and <sup>111</sup>In-leukocyte scans. *Radiology* 1980;137:425-432.
- Kipper MS, Williams RJ. Indium-111-white blood cell imaging. Clin Nucl Med 1983;8(9):449-455.
- Mark AS, McCarthy SM, Moss AA, Price D. Detection of abdominal aortic graft infection: comparison of CT and indium-labeled white blood cell scans. AJR 1985;144:315-318.
- Simpson AJ, Astin JK, Peck MR. Diagnosis of an abdominal aortic graft abscess by combined ultrasonography and scintigraphy. Clin Nucl Med 1979;4:338-340.
- 11. Gilbert BR, Cerqueira MD, Vea HW, Nelp WB. Indium-111-labeled leukocyte uptake: false-positive results in noninfected pseudoaneurysms. *Radiology* 1986;158:761-763.

## **ADDENDUM**

In the October 1990 Laboratory Studies article, "Investigation of Physicochemical and In-Vivo Behavior of Diastereomeric Iron-59, Gallium-68, and Indium-111-EHPG Trivalent Metal Complexes," by Susan L. Madsen, Christopher J. Bannochie, Arthur E. Martell, Carla J. Mathias, and Michael J. Welch, The identification curves in Figure 2 (p. 1666) are as follows: ● liver, ▲ small intestine, and ◆ upper large intestine.