

A mural thrombus of an infrarenal aortic aneurysm demonstrated as photon deficiency in a radionuclide study

W.J. SHIH,* C.H. TSAI,** A. KAZMERS,* J.K. LEE,** K. GROSS,* V. STIPP,*
C. PULMANO* and S. MAGOUN*

**VAMC and University of Kentucky Medical Center, USA
and **China Medical College, Taichung Taiwan, Republic of China*

Radionuclide angiogram (RNA) and aortogram may underestimate external aneurysmal diameter. Photon deficient areas are not uncommon along the abdominal aortic aneurysm (AAA) on RNA. To determine whether or not photon deficient areas along the aneurysm could represent a large thrombus, we studied radionuclide aortic angiography in thirty-eight patients during a preoperative cardiac gated study. All the patients (men, ages from 60 to 78) had CT, US, and/or aortogram for comparison. The presence of a thrombus was determined by CT, US, and/or surgical findings. Twelve of 38 (32%) patients' RNA and blood pool images showed photon deficient areas along the aneurysmal walls having a large concentric or eccentric thrombus of the AAA. A large photon deficient area could be detected along the narrowing calibre of the aorta lumen. This finding results from a large mural thrombus being interposed between the left or right bowel/mesentery activity and the activity of the aneurysms functioning patent lumen. We concluded that a photon deficient area along an inferorenal aortic aneurysm may indicate a large thrombus of either eccentric or concentric type within an AAA.

Key words: radionuclide angiogram, abdominal aortic aneurysm, photon deficient area, concentric/eccentric thrombus