Role of gallium-67 scintigraphy in the evaluation of occult sepsis in the medical ICU

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Body: Patients in intensive care units (ICUs) frequently have multiple infections or persistent fever despite management. This study was to evaluate the diagnostic contribution of gallium-67 scintigraphy in ICU patients with suspected occult sepsis. One hundred and seventeen patients who had undergone gallium-67 scintigraphy in the ICU of our medical center over a 3-year period were retrospectively reviewed and analyzed. Patients were categorized into Group 1 (n = 84), those with a known infectious source, but who still had persistent fever or sepsis despite antibiotic treatment or abscess drainage; or Group 2 (n = 33), those without an evident infectious source after clinical, physical, and imaging studies. Among these patients, 19 (16.2%) had a new diagnosis. In Group 1, 12 patients (14%) had a new infection, including pneumonia (4 patients), bed sore infection (2 patients), pulmonary tuberculosis (2 patients), leg cellulitis (1 patient), psoas muscle abscess (1 patient), osteomyelitis (1 patient), and infective endocarditis (1 patient). In Group 2, seven patients (21.2%) had a new infectious source, including septic arthritis (3 patients), osteomyelitis (2 patients), neck abscess (1 patient), and cholecystitis (1 patient). Gallium-67 scintigraphy helped to detect new or additional infectious sites, particularly bone, joint, and soft tissues.