

## **Tc-99m CIPROFLOXACIN SCINTIGRAPHY IN SEPTIC ARTHRITIS CAUSED BY HEMATOGENOUS SEEDING FROM A DISTANT FOCUS - CASE REPORT**

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The diagnosis of acute septic arthritis is a medical and surgical emergency (despite improved antimicrobial treatment) because septic arthritis is a rapidly destructive joint disease. Microorganisms in the synovial space trigger an acute inflammatory reaction in which toxins, enzymes and cytokines are released, resulting in destruction of articular cartilage and subchondral bone. Underlying chronic joint diseases, like rheumatoid arthritis and osteoarthritis, are the most important predisposing factor. The synovium is extremely vascular and contains no limiting basement membrane which allows easy access of blood contents into the synovial space. The key to management of septic arthritis includes early recognition and, as possible, noninvasive diagnosis.

Patient T.M., male, 65 years old, was previously admitted to clinic of cardiology because of serious arrhythmia. He was treated in March 2005. with antiarrhythmics using intravenous cubital cannula, which was infected. Few weeks after that, an acute onset of fever and local findings on right knee (pain, warmth, swelling and limited joint motion), were observed. Patient was transferred to orthopedic clinic with serious suspicion of septic arthritis of right knee. Laboratory findings were: CRP 119 (0-5), SE 84, fibrinogen 7.31 (1.7-4.1), Le 10.3, albumin 25 (34-54). Plain radiography showed arthrosis of right knee (III-IV degree) in acute exacerbation. Before the examination of synovial fluid by needle aspiration, scintigraphy with ciprofloxacin labeled with Tc-99m was done. Imaging was performed 5 minutes, 1 hour, 4 hours and 24 hours after iv. injection of radiopharmaceutical. All scans showed increased uptake in right knee (even at 24 hours), clearly suggesting bacterial joint infection.

Patient underwent joint decompression with evacuation of infected exudate and with use of adequate antibiotic (*Staphylococcus aureus* was cultivated from synovial fluid), return to full and painless range of motion. Scintigraphy with ciprofloxacin plays important role in early detection of bacterial infection and enables successful treatment.