ORIGINAL ARTICLE

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The value of Tc-99m Nanocolloid scintigraphy in the evaluation of infected total hip arthroplasties

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The early diagnosis of loosening is very important, since it provides a chance to protect the bone structure by means of a good postrevision outcome. Although the delayed stage of infected loosenings can easily be detected by clinical presentations, significant laboratory data and plain X-rays, diagnosis becomes a problem in the early stage. In this study the value of Tc-99m Nanocolloid (NCol) scintigraphy in the diagnosis of infected loosenings was evaluated in 28 patients with painful total hip arthroplasty and 10 controls without any complaint after total hip arthroplasty, by comparing this method with laboratory data, plain X-rays and 3-phase Tc-99m methylene diphosphonate (MDP) scintigraphy. Tc-99m NCol scintigraphy was found out to be a very valuable method with 100% sensitivity, 84% specificity in the diagnosis of infected prosthesis and it was superior to laboratory data, plain X-rays and 3-phase Tc-99m MDP scintigraphy, but requires to be evaluated in conjunction with plain X-rays for more information and in order to prevent false positive results.

Key words: Tc-99m Nanocolloid, infection, arthroplasty, hip joint