



2. BONE SCINTIGRAPHY - THE CONER STONE IN TREATMENT MANAGEMENT FOR OSTEOPHILIC NEOPLASMS

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Introduction. Bone scintigraphy is a nuclear medicine imaging investigation that studies the biodistribution of a radiotracer at the skeletal level. It is considered to be a very sensitive technique due to the fact that it can detect and diagnose the presence of bone metastasis especially in case of osteophilic neoplasms, thus proving to be invaluable in staging. Reevaluations throw bone scintigraphy can also be helpful in treatment management, mainly because it can compare acquired images at different time intervals and determine if the treatment the patient is undergoing is efficient or not.

Case statement. We present the case of a 67 years old male patient that presented to the Nuclear Medicine Laboratory of “Sf. Spiridon” hospital, with the referral diagnosis of prostate neoplasm (Gleason score = 7). This was the patient’s second bone scintigraphy. He underwent hormone therapy in the time between the two bone scintigraphy. The delay between the bone scans was approximately one year. PSA levels decreased during the treatment, however the patient was still complaining of increased generalized bone pain which led him to undergo a second bone scintigraphy. The patient underwent bone scintigraphy with a Siemens Dual-Head Gamma Camera equipped with a low energy, high resolution collimator. We acquired whole body images at 2 and a half hours after the i.v. administration of ^{99m}Tc – HDP (dose = 9,86MBq/kg). By comparing the previous image with the current one, it was concluded that the patient’s treatment was working and that some of the previous uptake sites on the skeleton have diminished or even disappeared.

Discussions. Bone scintigraphy is indicated especially in patient’s suspected or diagnosed with osteophilic neoplasms such as breast, prostate, lung, kidney and thyroid. This type of investigation has proven to be most effective in detecting and diagnosing the presence of metastatic dissemination at the skeleton level and by offering vital information for staggng purposes. Nevertheless, the influence on the treatment management should not be underestimated, as it can accurately determine the effectiveness of certain therapies compared to others.

Conclusion. Bone scintigraphy has proven to be invaluable in detecting and diagnosing the presence of bone metastasis. Nevertheless, the importance of bone scintigraphy in treatment management should not be overlooked as it can offer a more accurate evaluation of the treatment efficiency, especially in osteophilic neoplasms.