

Bone SPECT in Patients with Anterior Knee Pain

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SPECT of the knee is known to be valuable in the localization of abnormal individual structure in the knee. The purpose of our study was to assess its value in the recognition of abnormal pattern in patients with anterior knee pain.

Seventy seven patients with pain in the knee underwent bone SPECT of the knees. There were 43 male and 34 female patients. Their ages ranged from 2 to 64 years old. All patients had a history and physical examination and radiographic evaluations. SPECT was performed in all patients utilizing 20mCi of Tc-99m methylene diphosphonate and smaller dose for children. A correlation was then made between the symptoms, radiographic findings, surgical findings and the SPECT finding for each knee.

17 patients underwent arthroscopic procedure and confirmed the anatomical abnormalities. Among operative findings, 3 out of 4 cases patellar lesions showed positive SPECT findings, 5 out of 10 cases of anterior cruciate ligament lesions, 3 out of 4 cases of medial collateral ligament lesions, 4 out of 5 cases of medial meniscal lesions and 2 out of 3 cases of lateral meniscal lesions were positive on SPECT scan. One posterior cruciate ligament lesion was not detected on SPECT. Total 17 of 27 sites(63%) were correlated well between operative and SPECT findings. In the remaining patients, surgical management was not carried out yet.

In conclusion, knee SPECT is a relatively cheap and accurate method in detecting altered osseous metabolic activities in patients with anterior knee pain.