Added Value of SPECT/CT to Planar Bone Scan in Evaluation of Equivocal Bony Lesion in Breast Cancer.


Abstract:

ABSTRACT: Introduction: Planar bone scan (PBS) is a standard modality for detecting skeletal metastasis. Although PBS is very sensitive, it lacks specificity, especially when a solitary or few atypical osseous lesions depicted. The addition of SPECT/CT can greatly enhance diagnostic accuracy and help reclassify non-conclusive findings on PBS. In this work, we evaluated the added value of SPECT/CT in characterization of equivocal osseous lesions seen on conventional PBS in breast cancer patients. Materials and Methods: This prospective study recruited patients known to have breast cancer referred for conventional planar bone scanning (PBS). Immediately after PBS was acquired, planar images were reviewed. If two nuclear medicine physicians agreed on the non-conclusive nature of the lesion(s), a targeted SPECT/CT was acquired in the same day, to cover the suspected area. Diagnostic performance indices from both modalities (PBS& SPECT/CT) were compared against the reference standard (clinical/imaging follow-up for at least 6-12 months). Results: A total of 83 breast cancer patients were included in this study (81 females, 2 males) with median age 52 years (range: 32-84). The sensitivity, specificity and accuracy for PBS versus SPECT/CT were 89% vs. 100%, 30% vs. 87% & 57% vs. 93%; respectively; (P = 0.125,)

Keywords:

SPECT/CT, Equivocal lesions and Breast cancer

Published In:

Egyptian J. Nucl. Med., Vol. 18, No. 1, June 2019, 18 No.1, NULL