

THE ROLE OF 99mTc-MIBI SCINTIMAMMOGRAPHY IN RECURRENT BREAST CANCER

Rajkovača Z^{1,2}, Mikač G¹, Vuleta G¹, Mijatović J¹, Matavulj A², Kovačević P², Ponorac N²

¹Department of Nuclear Medicine, Clinical Centre Banja Luka, ²Department of Physiology Medical Faculty Banja Luka, Bosnia and Herzegovina

Breast conservation surgery has now become commonplace as it is less mutilating than radical surgery. The probability of recurrent tumour in this form of surgery increases. Post-surgery and radiotherapy changes as fibrosis, inflammation have reduced the accuracy of conventional method of breast imaging as X-ray mammography. Scintimammography is independent of tissue density and being a functional imaging technique.

THE AIM OF THIS STUDY is to assess the accuracy of 99mTc-MIBI scintimammography in patients with suspected recurrent breast cancer in the breast or loco regional tissues.

METHODS: Fifteen (18) women (median age 46 years, range 23-64 years) with suspected recurrent breast cancer in the breast or loco regional tissues were investigated. After routine analyses (clinical examination, ultrasound, X-ray mammography, and fine needle aspiration biopsy) they were examined by scintimammography (740 MBq of 99mTc-MIBI). All patients with suspected recurrent cancer in the breast or loco regional tissues (12) undergone surgery and the final diagnosis was determined by histopathological examination. Another 6 patients were followed 6-24 months. The scintigraphic studies were correlated with radiological findings and/or with histopathology.

RESULTS: There were 11 patients with recurrent cancer (8 with loco-regional recurrent and 3 in another breast). X-ray mammography identified seven of these cancers. 99mTc-MIBI scintimammography identified ten of eleven recurrent breast cancers. The one cancer not seen on scintimammography was positive on X-ray mammography. In the five out of seven patients without cancer, scintimammography were reported as having no changes consistent with cancer. X-ray mammography showed suspected cancer lesions in three out of seven patients without cancer. There were two false-positive scintimammograms and one false negative. Axillary lymph node recurrence occurred in two patients. Both of them were positive on scintimammography. 99mTc-MIBI showed higher sensitivity, specificity and accuracy per patient than did X-ray mammography (90.9% vs. 63.6%, 71.4% vs. 57.1% and 83.3% vs. 61.1%, respectively).

CONCLUSIONS: 99mTc-MIBI scintimammography has high sensitivity, specificity and accuracy in patients with suspected recurrence of cancer in the breast or loco-regional tissues. To identifying recurrent breast cancer disease is better to use scintimammography than X-ray mammography