Various diagnostic procedures are used for early detection of the loco-regional breast cancer and disease confirmation to help in making decision about surgery treatment (1-6). Physical examination is often unsatisfactory, and mammography and ultrasound are complementary for better detection. However, possibilities for better and more applicable methods based on molecular level in general hospital and general clinical practice are limited.

At present, X-ray mammography is the only accepted imaging modality to screen for the early detection of breast cancer tumor (7, 8). The sensitivity of mammography is lower in younger patients with dense, glandular breasts. In older women whose breasts are fatty, sensitivity of X-ray mammography for the detection of malignancy is higher. However, the positive predictive value of mammography is limited. The comparison of positive results of mammography and positive results of biopsy analyses vary in previously reported papers and depend on patients’ number as observed in some studies (8,9).

The ultrasound as second method for early tumor detection has been used to characterize breast tumor for over 20 years (10). Introduction of high-resolution ultrasound significantly increases detection of tumor mass presence. Today ultrasound is recommended as important method and complementary procedure for breast cancer detection in young women. However, differentiation between benign and malignant tumor of the breast, and making definitive decision is still difficult (9, 10). False-positive and false negative findings appear up to 11% in USA and Sweden (11, 12), depending on tumor extension, size, histology types, and especially when other abnormalities are simultaneously present. On this basis, analyses obtained by mammography and ultrasound from breast cancer postmenopausal women with family related cancer (breast and gynecological cancer previously extirpated) were compared with ex tempore histology obtained during surgery.

![Figure 1. Standard X-ray mammography shows normal size of both breasts without skin alteration, and tumor mass of 12 x 10 mm in size in upper quadrant of right breast](image1)

![Figure 2. The ultrasound of breast shows the solid hypoechoic mass in the breast 9.5 x 5.7 mm in size with distal attenuation, indicating the possibility of malignant process (linear transducer 7.5 MHz, Toshiba Core vision)](image2)

Although, mammography and ultrasound showed a little difference in tumor size, both methods indicated the presence of tumor mass in the right breast. Ultrasound was more informative in relation to tumor characteristics. It indicated the presence of malig-
nant tumor on the basis of visualization and enlargement of ductal tissue of the breast and the presence of chronic mastitis. However, histological finding obtained during biopsy indicated presence of benign tumor with chronic mastitis. Histological finding probably contributed to overlapping and making mistakes in distinction of malignant tumor found by ultrasound examination on the basis of ductal alterations.

It can be concluded that results of physical examination, X-ray mammography, ultrasound and histology proven biopsy together may give valuable information for early detection, confirmation and establishing correct breast cancer diagnosis in general hospitals. On time and accurate diagnosis of loco regional disease helps surgeon to make early decision about the most appropriate modality for tumor extirpation.

REFERENCES


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