

between the blood serum and salivary parameters. Also, there are calculated the ratios of the enzyme activities: GR/G6PDH, GR/GST, GR/GGT and GR/GSH. The levels of enzymes activity and analysis of correlation indicated the imbalance of the antioxidant defense system in the blood serum and saliva in the patients. The activity of enzymes and content of GSH were significantly decreased in the blood and saliva in the patients with BC in comparison with the BDH patients.

Conclusions: The Invention (MD N3717 G₂ 2008) can be used for differential diagnostics of BDH and BC. The results reflect the interrelation between the activity of a pathological process and the imbalance of antioxidative defense in the patients with mammary gland tumors, and may be used for differential diagnostics and screening as an additional biochemical test.

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Poster

Breast volume increase may negatively impact the accuracy of preoperative mammography in breast cancer: correlation in 49 patients

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Aim: To investigate the impact of breast volume on mammographic false negative rate.

Material and Method: In our unit, 49 patients undergoing breast conservative surgery were evaluated retrospectively. Preoperative breast volume (BV) measurement was made by Grossman-Roudner Disc (GRD) method. Patients with preoperative excisional biopsy and with other organ cancer were excluded from the study.

Mammographies have been performed in nine different radiology department. In mammographic evaluation, BIRADS 1-3 were considered as false negative while BIRADS 4 and 5 are accurate.

Findings: All patients with breast volume less than 425 ml had accurate mammographic findings (BIRADS 4 or 5), while the ones with breast volume over 425 ml had a 34.6 percent false negativity in mammography. The false negative rates of preoperative mammography were 10.8 in the patients with the breast volume below 700 ml and 41.7 percent in the patients with the breast volume above 700 ml (table 1).

Table 1

Breast volume (ml)	Number of cases	False negativity in preoperative mammography (%)
<425	23	0
>425	26	34.6 (p < 0.05)
<700	37	10.8
>700	12	41.7 (p < 0.005)
Total	49	18.4

The comparison of both cutoff rates of breast volume revealed that the difference was statistically significant (p < 0.05).

Conclusion: The data in this study showed that the false negative rate of preoperative mammography in breast cancer has been impacted negatively by the increase of the breast volume. But these results should be confirmed by the prospective studies that the mammographic examinations were made in a single radiology department.

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Poster

The efficacy of stereotactic vacuum-assisted biopsy and needle localization vacuum-assisted biopsy for diagnosing breast microcalcification

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Background: This study was conducted to evaluate the efficacy of 2 percutaneous breast biopsy techniques for diagnosing microcalcification: stereotactic vacuum-assisted biopsy (VAB) and needle localization VAB.

Material and Methods: Between November 2002 and September 2007, 138 patients underwent percutaneous breast biopsy for microcalcification. Of these, 59 patients underwent needle localization VAB and 79 patients underwent stereotactic VAB with using a prone-table mammographic unit, respectively. patients with focally clustered microcalcification underwent stereotactic VAB and patients with diffuse or deep seated microcalcification and patients with small breast underwent needle localization VAB. we retrospectively reviewed the characteristics of the lesions and the percutaneous biopsy results for all the cases.

Results: Percutaneous biopsy was successful in 135 cases (97.8%). Of the 135 successfully performed cases, 34 cases (25.2%) were malignant and there were 4 (11.8%) underestimations. For the stereotactic VAB group,

13 of the successfully performed 76 cases (17.1%) were malignant and there were 2 (15.4%) underestimations. In needle localization VAB group, 21 (36.6%) of the 59 cases were malignant and there were 2 (9.5%) underestimations. There was no major complication in all the cases.

Conclusions: With using stereotactic VAB and needle localization VAB, we can biopsy accurately and safely in almost all cases with leaving only minimal scar. So, percutaneous biopsy can be considered as a substitute for surgical biopsy for microcalcification of the breast.

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Poster

Ultrasound guided vacuum assisted biopsy of suspicious microcalcifications of the breast

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Background: The pre-operative diagnosis of suspicious microcalcifications usually require stereotactic biopsy or surgical excision after wire localization. Although both technique are successful in diagnosis of microcalcifications, the techniques require mammographic compression of the breast that is uncomfortable for the patients, and cause problems of ionizing radiation. Generally U/S guided procedures are more preferred by patients because they are more comfortable supine, the breast is not compressed, and the procedures are often performed faster. The purpose of this study was to evaluate the feasibilities of ultrasound guided mamotome biopsy of microcalcifications of the breast.

Material and Methods: Between September 2006 and october 2009 One surgeon performed consecutive 61 procedures in 59 patients presenting with microcalcifications without associated mammographic or ultrasonic or palpable masses. If there is uncertainty in correlating mammographic findings with ultrasound findings, the area is reevaluated after long straight needle localization (9 cases). Specimen mammographs were obtained for each lesions, with success of the procedure based on identifying over 90% of clustered calcifications and over 50% of segmental distributed calcifications. Stereotactic biopsy was carried out when ultrasound guided biopsy was unsuccessful.

Results: Of 83 lesions, 61 lesions were identified sonographically (identification rate: 73.5%). Except for two lesions, 59 lesions were successfully biopsied (success rate: 97%). All procedure could be performed within 30 min (9-28 min). There was no major complication except minor hematoma or pain.

Conclusion: Ultrasound guided vacuum assisted biopsy of microcalcifications of breast can be successfully performed at experienced hand.

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Poster

Punch Biopsy: a useful adjunct in a rapid diagnosis breast clinic

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Background: Triple assessment of breast lesions usually involves the use of core biopsy or FNAC. Punch Biopsy (PB) is a technique widely used by dermatologists and can be used in superficial breast lesions with dermal involvement. The technique involves taking a small disk of full thickness skin under local anaesthesia using a circular blade. We studied the utilization of PB in a rapid diagnosis breast clinic.

Method: We introduced PB in the assessment process in a rapid diagnosis breast clinic in December 2001. In this clinic patients undergo triple assessment in a single clinic visit. We reviewed all PB's done over a 7-and-a-half-year period from its introduction to May 2009. The indications for the biopsy and the contribution of PB to final diagnosis were recorded.

Results: One hundred patients underwent a PB. The commonest indications were to rule out Paget's disease in patients presenting with itchy/eczematous nipple or breast skin (n = 25), discolouration of the breast skin (n = 23), breast lump with skin involvement (n = 23) or frank ulceration (n = 4) and nodules in the breast skin or a previous surgical scar (n = 18). The mean age was 56 years (range 17-98 years). Eighteen patients had a previous history of breast cancer. Final diagnosis was benign in 80 patients and malignant in 20. In 80 patients with benign conditions, PB was the only pathological component of the triple assessment in 74. The malignant diagnoses consist of primary breast cancer in 12, recurrent breast cancer in 5 and metastatic breast cancer, basal cell carcinoma and radiation-induced angiosarcoma in one patient each. In 8 of these patients PB was the only source of histological diagnosis.

Conclusion: PB is a valuable adjunct to conventional methods of tissue diagnosis such as core biopsy and FNAC in both benign and malignant breast lesions.