Conclusion: MR imaging is more effective modality for assessment of the size and number of malignant lesions in the breast than mammography.

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Clinical usefulness of preoperative evaluation of mammary tumours with ^{99m}Tc-sestamibi imaging

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Purpose: To asses the sensitivity and specificity of scintimammography in determining the nature of mammary tumours.

Methods: All the patients had mammary tumours and mammography, ultrasonography, and fine-needle-biopsy were performed prior to scintimammography. All tumours were surgically removed within 2 weeks of scintimammography and histological diagnoses were obtained in all cases. Scintimammography was performed 20 min after injection of 20 mCi (740 MBq) of Tc99m-MIBI with 2 lateral and 1 anterior planar images.

Results: Out of 40 patients studied 23 true positive (consistent with histological diagnosis), 11 true negative, 2 false positive, and 4 false negative results were obtained. The sensitivity and specificity of scintimammography were 0.85 with a positive predictive value of 5.54 and a negative predictive value of 0.18. The false negative findings consisted of 1 ductal and 3 lobular carcinomas with tumour sizes between 7 and 15 mm.

Conclusion: The sensitivity and specificity of scintimammography are sufficient for determining the possible malignant nature of mammary tumours with indeterminate results after mammography, ultrasonography, and fine needle biopsy. If scintimammography is normal, a follow-up of the patient is adequate with no need for surgical intervention. In patients with a history of previous operations, severe mastopathy, or multiple benign changes in the breasts, scintimammography can be used as a screening method in routine follow-ups.

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Nipple discharge correlation between: clinic, radiology and histology

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Purpose: In a prospective study the predictive value of the correlation between the visit motive, the radiological images by galactography and the histology of the surgical piece.

Methods: Study in 69 patient that were presenting unilateral and secretion confined to one duct (thelorrhagia in 75.36% of the cases and serous or watery discharge in 24.63%) We have performed the next study: clinical exploration, mamography, citology of the secretion, galactography and surgical removal of the zone indicatet in the galactography. The greater frequency age is between 51 and 60 years. The galactography has performed by coaxial technique catheter-guide. We have classified the images in 5 types: stop, ectasy, extravasation, with de fill defect, stenosis and galactocele. The surgical removal has made canalize of the affected duct whih lacrimal probe, and the surgical incision was circumareolar.

Results: Ther are no differences in the obtained radiological images in the thelorrhagia or serous discharge. The more frequency have been observed combinations of 2 or 3 types (76.81%), being the most frequent: stop, ectasia and landfill defect. The histology of the surgical removal has revealed: 43 benign disease (62.31%), 15 proliferatives breast disease without atypias (21.73%), 1 proliferative breast disease with atypias (1.44%) and 10 malignant disease (14.49%). The malignant diseases, 4 of they have been invasive carcinoma (40%), 5 carcinomas in situ (50%) and 1 microinvasive ductal carcinoma (10%). In the malignant diseases a 80% was presenting clinically thelorrhagia and a 20% serous discharge

Conclusion: In patient with nipple discharge, the radiological image in the galactography does not has predictive value on the malignancy or benignity of the lesion, but it is the election method for the previous location the duct abnormality to the surgery.

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Endocrine cell component in the breast carcinomas

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Purpose: We have studied 180 cases of breast cancers for investigation endocrine cell component (ECC) in them. Knowledge of neuroendocrine aspects of breast tumors could help to select tactics of treatment of the patients.

Methods: We used histochemical reaction of Grimelius for primary identification ECC in breast tumors and immunohistochemical reactions on chromogranin A and neuron specific enolase.

Results: During histochemical and immunohistochemical reactions ECC was revealed in 43 breast tumors from 180. We distinguished three types of breast cancers which contained different quantity of ECC: 1) singular endocrine cells (maximum 10%); 2) from 20 to 50% of ECC in the tumor cell population; 3) more then 50% of ECC in tumor parenchyma. There were presented saving of endocrine differentiation features in some tumor cell metastasis in lymph nodes.

Conclusion: ECC was shown in each 4-th breast tumor. It is necessary to use histochemical and immunohistochemical methods for right diagnosis breast cancers with ECC.

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Full length analysis of BRCA1 gene in sporadic breast cancer: Detection of common haplotypes and a novel possibly somatic mutation affecting gene translation

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Purpose: So far no alterations of BRCA1 gene have been demonstrated to occur in sporadic breast cancer, though 9% of sporadic ovarian cancers display somatic inactivation of BRCA1. However, decreased BRCA1 gene expression is frequently found in sporadic breast cancer possibly due to altered regulatory mechanisms. We have retrospectively screened 96 Italian sporadic breast cancer cases to identify any BRCA1 association.

Methods: 96 sporadic breast cancer cases, not selected for age or family history, and two age-selected unaffected female control populations (n = 98 + 81) were studied. When possible, genomic DNA was obtained from PBL, primary tumors, metastatic lymphnodes. Full RNA-SSCP analysis and direct sequencing of the 24 BRCA1 exons were performed. When needed BRCA1 analysis was extended to patient's relatives. Statistical analysis and Hardy-Weinberg equilibrium was performed by c2 test.

Results: 7 different common polymorphisms in complete linkage disequilibrium, both in breast cancer and control populations were identified. These polymorphisms scattering from exon 11 throughout intron 18 generated only three haplotypes. The homozygous frequency for the less common haplotype raised from 0.07 in both control populations to 0.14 in breast cancer population. No somatic mutations were identified, with the exception of a single nucleotide transversion (G > C) at position 117 of the second exon, in an early onset, very aggressive, sporadic breast cancer. This pur >pyr transversion, 3 nucleotides preceding the ATG start site, falls within the consensus sequence for the translation initiation codon. The mutation was absent in the proband's unaffected parents and the healthy brother, arguing against familial transmission and suggesting somatic origin.

Conclusions: Haplotype distribution may suggest a trend of association of the less common haplotype to increased risk of breast cancer. Whether BRCA1 polymorphisms may be associated with different risks, probably influenced by other genetic or environmental factors, remains to be further investigated. The characterized mutation may be the first BRCA1 somatic mutation identified in a sporadic breast cancer. This purine >pyrimidine transversion at position −3 of the consensus sequence for the translation start site matches with the already demonstrated reduced synthesis of BRCA1 in tumor tissues.