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شبكة المعلومات الجامعية التوثيق الالكتروني والميكروفيلم

# بالرسالة صفحات لم ترد بالاصل

# Mammographic and Sonographic Features in Different Breast Diseases Compared to its Pathological Findings

### **Thesis**

Submitted to the Faculty of Medicine, University of Banha in Partial Fulfillment of the Doctor Degree

in Radio Diagnosis

By

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### Errata:

Page28 line 8:pathologic(not pathologies)

Page45 line7:spiculation(not speculation)

Page 48 line 13:huge (not hung)

Page52 line 11:inflammed(not inflamed)

Page53 line 12: benign (not being)

Page60 line 6:signs (not sings)

Page69 line 3: bone (not bore). line 16: retraction (not retration)

Page 70 line 13: and (not add)

Page74:ovoid(not avoid)

Page82 line 10:till

Page138line 16:ratio (not ration).line 17:6.43 not 9.58

Page140 line 19:malignancy(not mailgnancy)

Page146 line 3 :spiculated (not speculated)

Page149 last line:suspecion( not suspision)

Page150 line 12:Diagnostic(not diagnostc).Last line:heterogenous

Page151 line1:absent. line22:and (not an)

Page152 line14: irregularly.line25:benignity (not malignancy)

Page153 line 21 and 27:acoustic(not acustic)

Page 154 line 24: wider (not winder)

Page 155 line 16:malignant .last line :significantly

Page 156 line 13: eccentrically (not eccentricall)

Page158 line 9: important(not imported)

Page159 line5: family (not familt)

Page 160 line 15: The (not he)

### INTRODUCTION AND AIM OF THE WORK

### INTRODUCTION

1

Breast cancer is the second leading cause of female cancer death after lung cancer; it occurs in 12.5% (one of every eight women) during their lifetime and accounts for 32% of cases of female cancer. (Benichou J, Gail, 1996)

Mammography is considered to be one of the most accurate, popular and non invasive methods of breast evaluation in symptomatic women, more over it is used for screening of the breast in asymptomatic women. (Primic-Zakel, 1999)

The most important use of mammography is in the investigation of asymptomatic women as a complementary method to clinical investigation. Even though mammography is more accurate in diagnosis of breast lesion than clinical investigation. Many clinically occult breast lesions may be visible mammographically. (Gravelle IH, 1992 & Vanel D., Masselot J, 1988)

Mammography technique is based on the principle of soft tissue film which includes low KV to give soft film, high MAS to give sufficient film blackening, collimation of the beam to decrease scatter, small focal spot, small object film distance, use of screen film to give maximum detail and compression of the breast to decrease thickness, movement and blurring of the image. (Haus AG, 1990)

Proper positioning is essential so as to include as much as possible of the breast on the image. There are three basic views, the craniocaudal, mediolateral and the oblique projection for the axillary tail. (Cardenosa G,Eklund GW, 1992)

Technologic advances in combining mammography and ultrasound has produced a higher diagnostic accuracy. (Skaane P, 2000)

While mammography is the most sensitive technique for detecting cancer in the fatty breast tissue, U/S is more useful in women under 35 years and those women with dense, fibrous and glandular breasts. (Gravelle 1H, 1989)

A high frequency of 7.5 MHZ linear transducer is used to image the breast parenchyma. The time gain compensation is adjusted to balance the skin echo, subcutaneous fat, dense breast parenchyma or mammary layer, the bright reflection from the retromammary layer and the pectoral muscle. Ultrasound for the breast is widely used for dense breast, tender breast, non palpable opacity seen on mammography. It is essential to differentiate cystic from solid lesions and for biopsy guidance. (Skaane P, 2000)

Galactography is the contrast examination of the lactiferous ducts. Its main value is in the investigation of nipple discharge, particularly discharge from one duct orifice. It gives idea about the course of the lactiferous duct, calibre and ductal filling defects. (Gravelle IH, 1989)

Fine needle aspiration is a widely used method for pathological breast examination and gives accurate data especially when combined with breast mammography and ultrasound. (Azzofardi JGF, 1997)

### AIM OF THE WORK

The aim of this study is to evaluate the reliability of radiological and sonographical features of breast lesions comparing it with pathological findings.

### REVIEW OF THE LITERATURE

### Review

### Embryology:

The breast is derived from ectodermal origin. Mammary primordium appears as a longitudinal cutaneous thickening on either the epidermis. Considering the fact that mammary epithelial differentiation is induced by mammary mesenchyme and that certain aspects of hormone response (androgen – induced mammary regression) are linked to mesenchymal –epithelial interactions, it is evident that the biology of mammary gland arises from and maintained via cell-cell interactions.

The mammary gland is a hormone target organ derived from epidermis and develops, as a result, reciprocal mesenchymal epithelial interactions. The induction of mammary differentiation from indifferent epidermal cells by mammary mesenchyme implies induction of the complement of hormone receptors characteristic of normal mammary epithelium. (Lamarque JI et al, 1984)

The mammary bud gives rise to 16-26 secondary epithelial growths originating from the deep surface of the mammary ridge.