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التوثيق الالكتروني والميكروفيلم

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بالرسالة صفحات لم ترد بالأصل

STUDY OF BREAST PARENCHYMATOUS CHANGES AND BREAST CYST FLUID PATTERN IN FIBROCYSTIC DISEASE AS CANCER RISK PREDICTORS

Thesis

Submitted to the Faculty of Medicine,
University of Alexandria,
in partial fulfillment of the requirements
of the degree of

MASTER OF SURGERY

By

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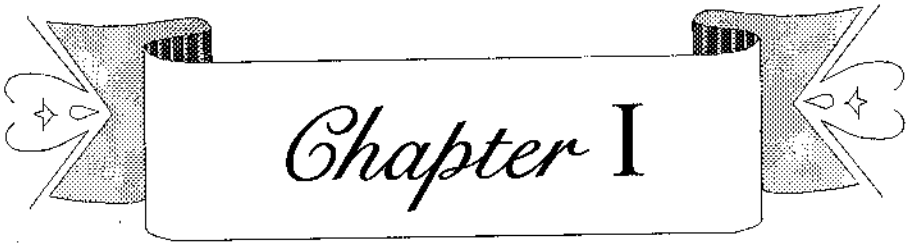
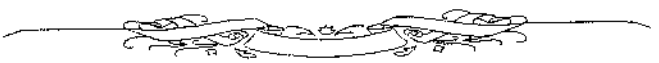


Chapter I

INTRODUCTION



INTRODUCTION

Fibrocystic disease is an extremely important lesion because of its high frequency and the ability of some of its subtypes to simulate clinical, radiographic, gross, and microscopic appearance of carcinoma and the possible relationship with carcinoma.[1]

Many other names have been proposed over the years for this disorder, none of them is entirely satisfactory, and some are highly objectionable: cystic disease, cystic mastopathy, cystic hyperplasia, mammary dysplasia, Schimmelbusch's disease, chronic mastitis, gross cystic breast disease. Fibrocystic disease is the name most commonly used although it has at least two drawbacks; it over emphasizes the fibrous component of the disorder and it is linked in the mind of many physicians and patients with a precancerous condition which in most instances it is not. To avoid the potentially serious problems related to the latter situation, the use of alternative term such as fibrocystic condition is recommended.[1]

Many women present with a history of breast pain, tenderness and nodularity. This symptom complex is usually termed mastalgia which is reported to be the most common breast related symptoms causing women to consult physicians and surgeons.[2] It is estimated that at least 50% of all women have palpably irregular breasts. Furthermore, cyclic discomfort and nodularity of the breasts are so common to be considered a normal physiologic occurrence.[3]

Because fibrocystic disease appears to be an aberration of normal physiology, a consideration of the normal process occurring within the breast may provide an understanding of this benign breast disorder.

Breast development

The premenstrual breast consists of only a few ducts. At menarche, increased deposition of fat begins with formation of new ducts by branching and elongation and the first appearance of lobular units. This process of growth entail cell division and is under control of estrogen, progesterone, adrenal hormones and the trophic effects of insulin and thyroid hormones.[3]

The epithelial and stromal tissues of the breast lobules are under balanced estrogen and progesterone control during the menstrual cycle. Cyclic changes are associated with clinical symptoms of heaviness and premenstrual fullness almost never associated with detectable histologic changes. Superimposed on normal cyclic changes, are the much more striking effects of pregnancy and lactation. With the cyclic breast changes responsive to ovarian hormones, there is abundant opportunity for minor aberrations to occur. Indeed, on histologic examination of an asymptomatic woman in her 30's, fibrosis and adenosis can usually be identified.[4]

Involutional changes are seen by 35 years of age. For the remaining 15 to 20 years of ovarian function, cyclic hormonal changes and involution are occurring simultaneously. This coincides with the peak incidence by age of women presenting with mastalgia.[4] The involutional process involves orderly regression of lobules and surrounding fibrous tissue. Intralobular connective tissue is replaced by interlobular-

type fibrous tissue. By menopause, only a few ducts remain with no evidence of lobular structures. If specialized stroma disappear prematurely, the epithelial acini remain and may form microcyst. With mechanical obstruction, macrocysts can occur.[3]

A comprehensive classification **(Table I)** which puts all of the processes of physiologic changes, growth, development and involution into a single framework is the "ANDI" classification.[5] (Aberration of normal development and involution).

ANDI

Table (I): Aberration of Normal Development and Involution.[5]

Age (years)	Normal process	Aberration
<25	Breast development	
	- Lobular	Fibroadenoma
	- Stromal	Juvenile hypertrophy
25-40	Cyclical activity	Cyclical mastalgia
		Cyclical nodularity
35-50	Involution	
	- Lobular	Macrocysts
	- Stromal	Sclerosing lesions
	- Ductal	Duct ectasia

The term "aberration of normal development and involution" (ANDI) was proposed to classify most common breast disorders within a physiologic setting.[4] This approach recognizes that most breast symptoms and disorders are based on the normal processes of development and involution. Within this conceptual framework, conditions that affect a large portion of the population should be regarded as normal or, at worst, a disorder but certainly not a disease. An example is the presence of premenstrual mastalgia and nodularity, which is a "normal" event. The breast pain of women with gross exaggeration of these physiologic symptoms with no pathologic findings is termed, using the ANDI classification, "cyclic pronounced mastalgia" or "severe painful nodularity". This is the clinical presentation often termed "fibrocystic disease" a term that is no longer considered appropriate.

The real incidence of ANDI is difficult to estimate because the diagnosis depends a great deal on the liberality of the individual clinician or pathologist.[6] The human gross cystic breast disease is a relatively widespread benign pathological condition affecting about 7-10% of adult women occurring with the highest incidence in the premenopausal decade.[7,8]

Etiology:

The fibrocystic changes of the breast constitute a clinical entity that has no clear etiology, although it is thought that persistent estrogenic stimulus may be the cause, but there are other hypothesis related to consumption of saturated fats and use of methyl xanthines.[9] The cyclic nature of most breast pain and the usual resolution at the menopause indicate that ovarian hormones may play a role in fibroadenosis and mastalgia causation. At least three theories of causes of hormonal imbalance have been proposed: increased estrogen production of the ovary, diminished progesterone level