SCREENING PROGRAM FOR BREAST EXAMINATION IN WOMEN USING HORMONAL CONTRACEPTIVES

THESIS

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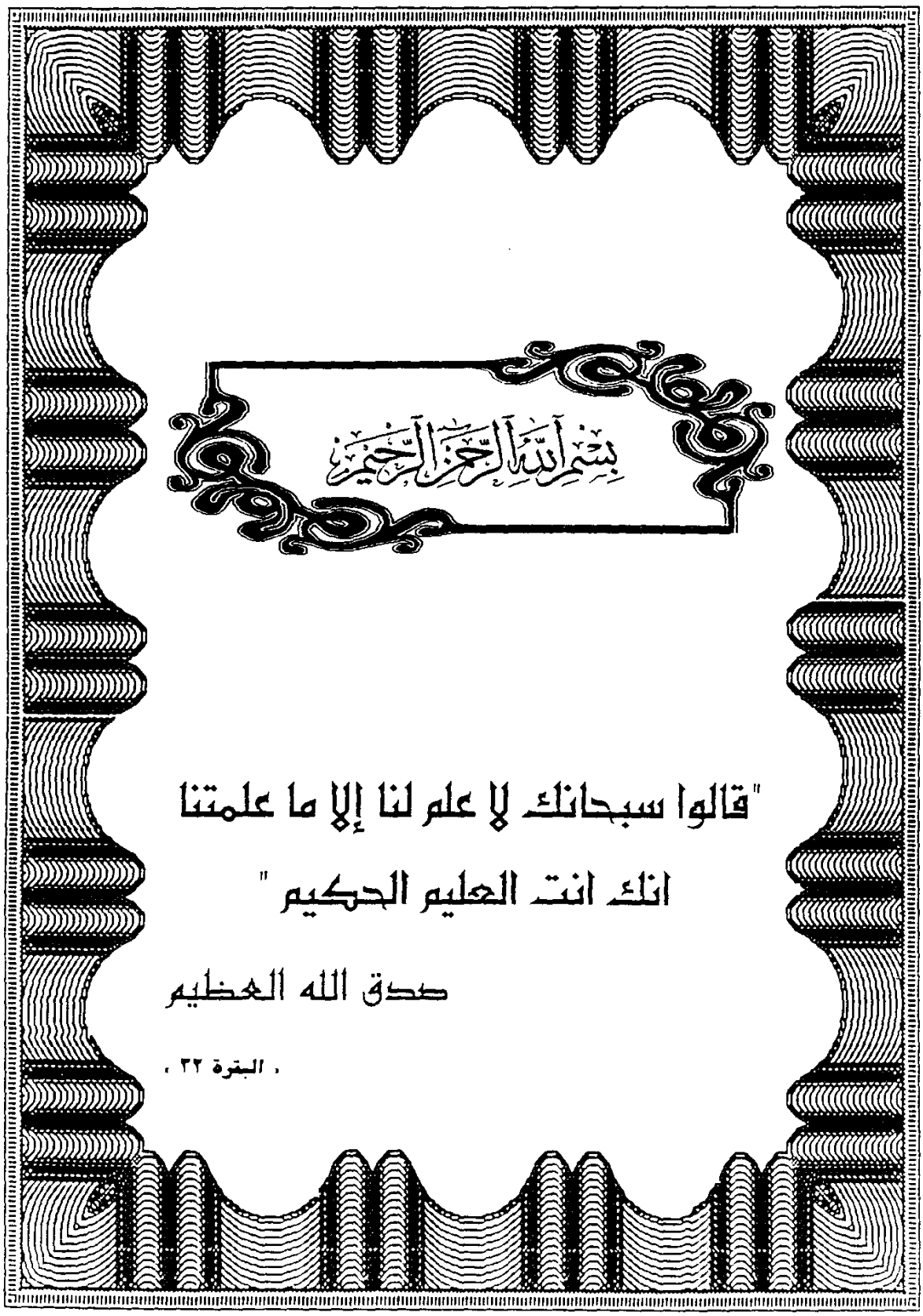

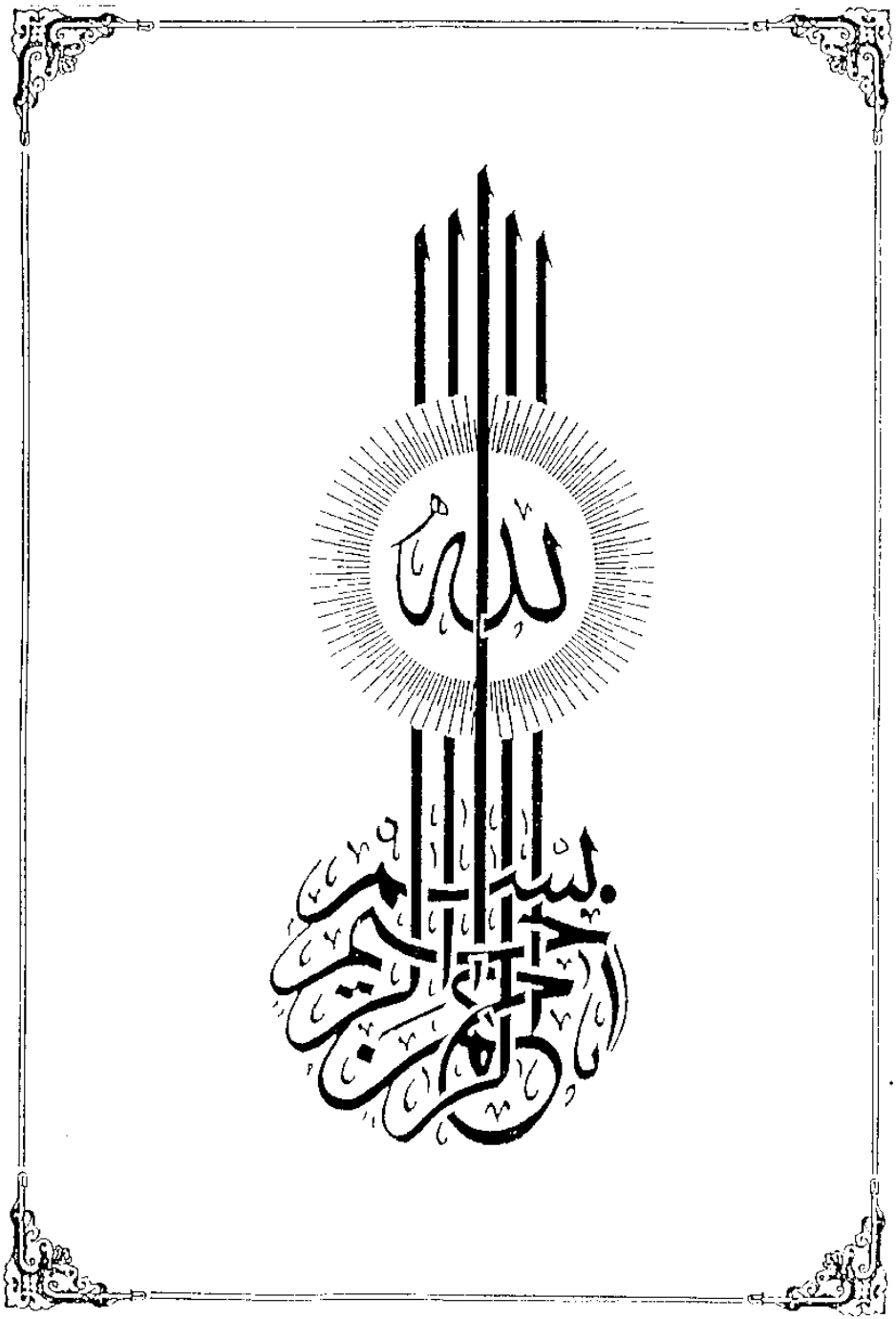

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TO MY HUSBAND,

MY DAUGHTER

AND MY SON

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INTRODUCTION

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There has always been a lot of arguments and investigations about the etiology and causation of benign and malignant breast diseases. A single causative factor has never been incriminated solely. Multiple risk factors have been attributed to be the etiology, for example: family history, race, cigarette smoking, lactation and non lactation, milk factor, endogenous steroid hormonal pattern disturbances and exogenous steroid hormonal supply in the form of contraceptives either oral combined pills or progestin-only injectables. (**Rains & Ritchie, 1986**).

In order to prescribe the appropriate method of contraception for a particular woman, the potential effect of that method on the risk of developing genital or breast neoplasm should be ultimately considered; especially oral contraceptive pills and injectables **(Herbst & Berek, 1993)**.

Trials have shown that early diagnosis alone of benign and malignant breast diseases-had improved the final prognosis remarkably. Early diagnosis means screening of patients by clinical examination mainly and by mammography for clinically positive cases. **(Von-Fournier, et al., 1993)**.

AIM OF THE WORK

1. Screening for any breast lesion that may change the choice of the method of contraception.

2. Screening for any breast lesion that may be related to a certain type of hormonal contraceptives.

3. To establish the best breast screening program for the ladies attending the family planning clinic.

4. To improve the clinical experience for breast examination ability.

5. To encourage, emphasize and teach the attendants the method of breast self-examination.

REVIEW

OF

LITERATURE

CHAPTER I

ANATOMY OF THE FEMALE BREAST

Embryology:

In the young embryo, a linear thickening of the ectoderm appears, called the milk ridge, which extends on both sides starting from the region of the axilla till the inguinal region. This ridge appears about the fifth week of embryonic life while the embryo is just 8 mm length and the ridge is formed of 2 to 4 layers of cells **(Whitehead, 1986)**.

The initial ridges regress rapidly afterwards leaving bilateral buds in the thoracic region, raised by mesenchymal proliferation **(Lamargue, 1984)**. This bud now thickens and becomes slightly depressed and sends off 15 to 20 solid cords of cells that grow into the underlying mesenchyme. Each cord represents a future milk duct and a lobe of the mammary gland. The cords continue to grow and branch throughout the fetal life till about birth time they canalize to form the lactiferous sinuses, lactiferous ducts and secretory alveoli. Meanwhile the underlying mesenchyme proliferates and causes the depressed bud to become raised and form the nipple. **(Whitehead, 1986)**.

Topography:

The mammary gland is a modified sweat gland, so it has no fibrous capsule or sheath, it lacks special blood vessels and nerves, and it has a generalized drainage of its lymph. **(Wilson, 1986).**

The glands are hemispherical in shape with their bases resting on the chest wall, and lying mainly on the pectoralis major muscle and inferolaterally on serratus anterior and inferomedially on the apponeurosis of the external oblique muscle. Both glands are separated from all these muscles by the deep fascia. Each gland extends from the second to sixth rib and from the side margin of the sternum to the midaxillary line. The gland rests on a condensation of superficial fascia which is the upward continuation of scarpa's fascia. Between this superficial fascia and the deep fascia over the pectoralis major, lies the submammary space. The full extent of the breast is apparent during lactation where it extends from the clavicle down to the eighth rib and from the midline medially to the edge of the latissimus dorsi posteriorly. The central region of the anterior surface of the breast (site of the nipple) is surrounded by the areola. **(Last, 1984).**

The axillary tail of the breast is a prolongation from the upper outer part of the gland which passes to the axilla through an opening in the axillary fascia known as the foramen of Langer, so becoming deep to the deep fascia and in direct contact with the main lymph glands of the breast. The axillary tail may be palpable in the normal female, can be the site of neoplasm and can be mistaken for lymph nodes, masses or lipomas. **(Rains & Ritchie, 1986).**

Structure: (Fig. 1, 2, 3, & 4)

The female breast consists of glandular tissue and fibrous tissue. The glandular tissue is contained in about 20 ill-defined lobes, each lobe composed of combined secretory and excretory systems in the form of compound tubulo-alveolar glands. Each lobe opens in the nipple by a separate duct (the lactiferous ducts), hence enabling the segmental localization of breast pathology in cases of nipple discharge. Each lobe consists of a variable number of lobules and associated extralobular ducts. The lobules are made of variable number of ductules (or acini) arising from a branched intralobular duct **(Hutson, 1985).**

The ductules are connected to a variable number of alveoli at one side and on the other side connected to a subsegmental duct which opens into the segmental duct

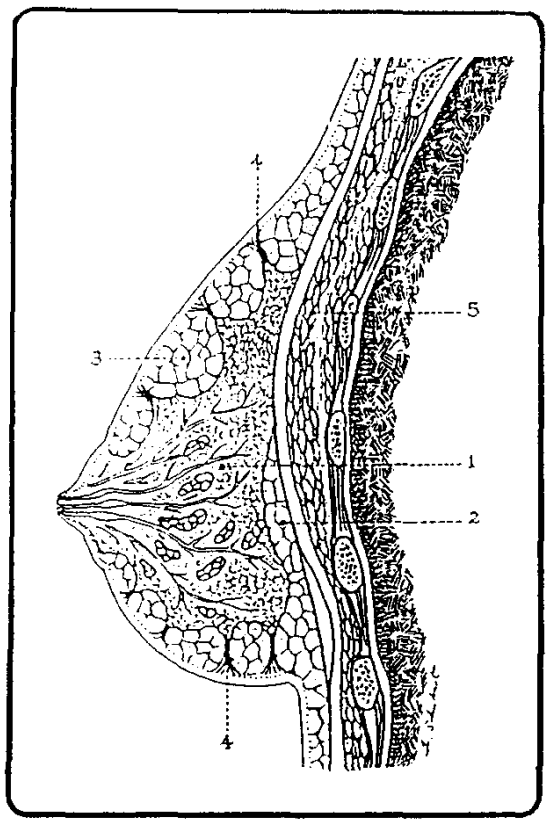

Figure (1) Sagittal section of the normal breast, showing its relation to the chest wall and the rib cage. 1, The mammary gland tissue. 2, Retromammary fat. 3, The investing envelope of subcutaneous fat. 4, The fibrous septa (Cooper's Ligaments). 5, Fat and pectoral muscle layer beneath the deep fascia. *(From* Sabiston D.C. Text Book of Surgery, 1991)