# EVALUATION OF THE DIFFERENT TECHNIQUES IN THE TREATMENT OF BREAST CANCER

ESSAY

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## A C K N O W L E D G M E N T

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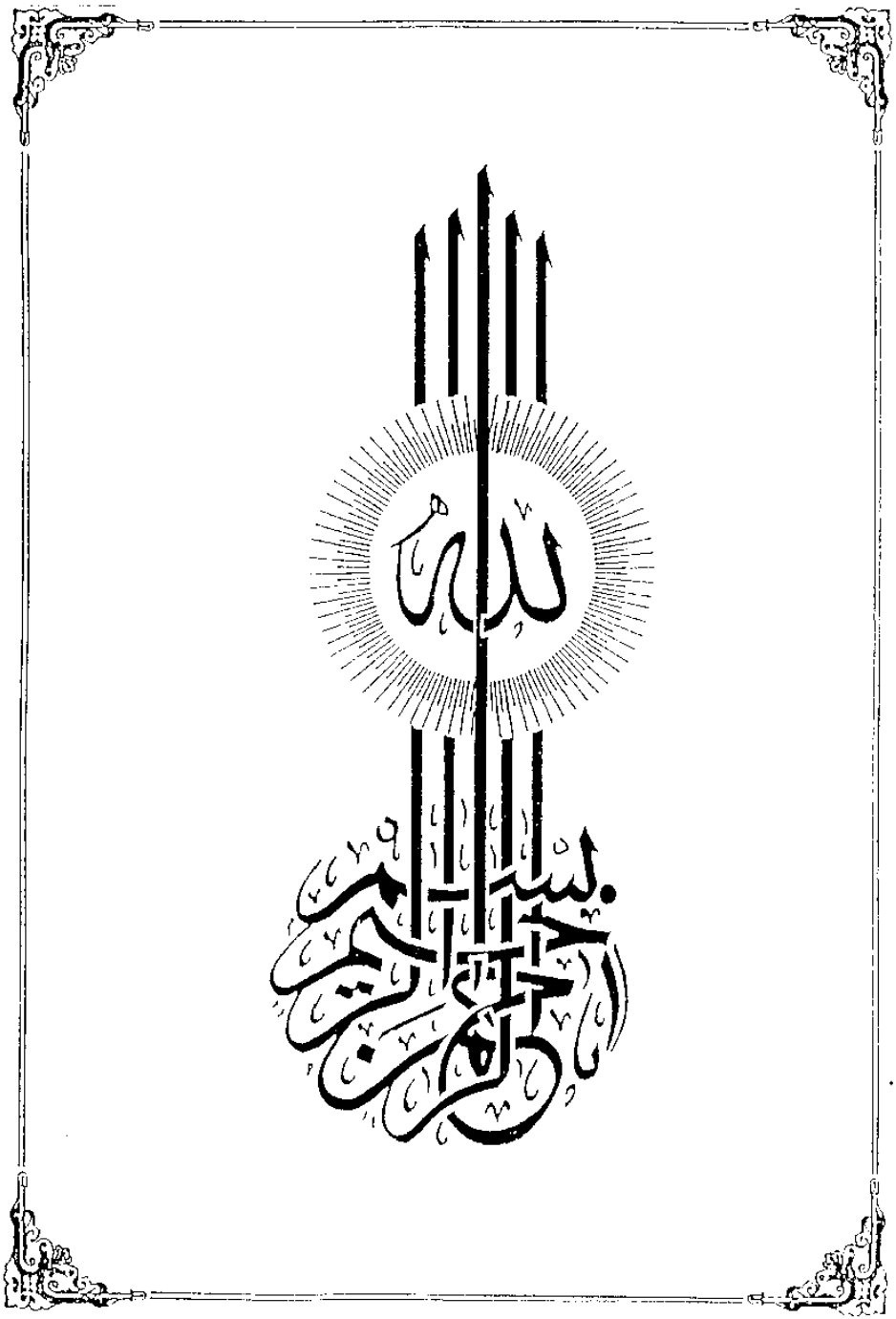

# C O N T E N T S

# INTRODUCTION

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# AIM OF WORK

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Carcinoma of the breast is the commonest malignant tumours in females. In this work we are going to evaluate the different methods in the treatment of breast cancer, ranging from lumpectomy up to supraradical mastectomy with or without pre or post operative irradiation , or the use of chemotherapy as an adjuvant to the surgery.

Also the role of estrogen receptor and the use of chemotherapy and hormonal therapy in the treatment of the advanced stages of breast cancer, as regards the mortality and morbidity and the quality of life in patients after such treatment.

## HISTORICAL REVIEW

The first historical reference to cancer of the breast appears in Edwin Smith surgical papyrus (3000 to 2500 B.C.). The author concludes that there is no treatment. References to cancer of the breast are scattered and brief over the following 2.500 years. Even in the large body of writing concerning Greek and Roman medicine, the corpus Hippocraticum, direct reference to the treatment of breat cancer is absent, although its clear that the condition was recognised. Celsus, a Roman of the first century, spoke of operation and advised limiting it to the early lesions. Galen spoke of operations for tumours, his system of medicine ascribed the disease to an excess of black bile, and logically excision of a local out break could not cure the systemic imbalance.

In the eighteenth century Le Dran removed the enlarged axillary nodes in his operation on patients with breast cancer. In the nineteenth century Moore of the Middlesex Hospital, England, emphasized that the axillary contents should be removed,in one block

together with wide removal of the breast. Halsted proposed a standard procedure, removing all the structures in one block. His first operation was performed about 1882 and he reported 13 cases in 1890. The procedure was almost as it is today,except that the pectoralis minor muscle was not removed. In 1894 Halsted reported more than 50 cases over the preceeding 12 years. In 1894 Herbert Willy Meyer of New York duplicate Halsted mastectomy, added the removal of the pectoralis minor muscle . (Schwartz, 1979).

At the present time, surgeons performing a radical mastectomy are likely to leave the clavicular portion of pectoralis major intact and more likely to select a horizontal incision through which to perform the procedure. In this sense,the radical mastectomy today is a modified radical mastectomy.

In 1896 Cheyne described a procedure that preserved the pectoralis major and minor muscle, but in other respects was similar to Halsted mastectomy. In 1948 Patey and Dyson reported on their experience with an operation that preserved the pectoralis major

muscle, but resected the pectoralis minor muscle. Careful evaluation of reports on this procedure indicate that the term modified radical mastectomy can encompass a spectrum of operations,from sampling of the lateral axillary nodes to formal dissection of the axillary contents. In 1977 Roses et al. reported a technique of total mastectomy with axillary lymph node dissection (Roses et al., 1981).

# REVIEW OF LITERATURE

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### TREATMENT OF PRIMARY BREAST CANCER

The aim of treating patients with primary breast cancer is to select a procedure that has the best chance of curing the greatest number of patients with the least disability and fewest side effect.

Fortunately, long term survival is common after treatment of breast cancer and many surgical techniques have been advised.

The mode of treatment chosed should ideally to:

1) Prevent the development of distant metastases in those patients whose tumour have not yet seeded the lymphatic or the blood stream.
2) Prevent local recurrence of the disease.
3) Eliminate extensive local surgery for those patients who will not benefit from it (Sabiston, 1981).

A variety of operations have been described and each has its advocates. They include : (i) segmental resection, (ii) simple mastectomy , (iii) radical mastectomy to remove the axillary lymph nodes and (iv) extended radical mastectomy

to include the internal mammary and/or the supra-clavicularlymph glands. Each of these operations may be supplemented by radiotherapy or by chemo-therapy. There is no strong evidence to suggest that any of these methods is superior to the others, and the main decision in an individual patient must be to define whether she is potentially curable or not. (Harding Rains and Ritchie, 1982).

Hormonal, biochemical, radiologic and isotopic evaluations may also be helpful in identifying some women with distant metastases.

Women with low resting level of 17-ketosteroid metabolite etiocholanolone tended to have a poorer pregnosis (Bulbrook and coworkers, 1960).

Serum calcium levels are rarely elevated until the patient has widespread bone disease detectable by history and radiological examination.

Elevated serum alkaline phosphatase, lactic dehydrogenase are important indicators for the hepatic metastases.

Radiologic studies of patients presenting with breast masses may reveal occult metastatic lesions.

Liver scanning is of particular value when the liver is palpably enlarged and liver function tests are abnormal but its not capable of detecting metastatic foci less than 1 cm. in diameter in all instances of preoperative evaluations.

## SELECTION OF PATIENTS

Operative treatment of breast cancer cannot be effective if the disease has spread beyond the area removed by the operation. Distant spread of the metastases to the other sites is an absolute contraindication to the radical operation.

The criteria of inoperability described by Haagensen (1963), include fixation of the local breast lesion to the chest wall, fixation of the involved lymph nodes in the axilla and the inflammatory carcinoma of the breast, but this clinical criteria are not observed in many institutions.

Haagensen had another method of evaluation called the triple biopsy, the object of this method is to exclude all the patients who have no chance of cure. Biopsy obtained from the breast lesion , highest axillary nodes and internal mammary nodes. If occult cancer is found in any of these areas , the patient is treated by radiation.

MacDonald (1962), introduced the term biological determination into the consideration of cancer, meaning that the biologic nature of the tumour primarily determines the response to therapy.

## SURGICAL AND COMBINED APPROACHES FOR TREATMENT

The fact that several techniques are available for the treatment of primary, potentially curable breast cancer indicates that no one is the best and that all have their inadequacies.

In planning the choice of surgery for breast cancer, one must be a ware of its multicentric origin, and the regional spread from the breast to the axillary and internal mammary lymph nodes.

The scope of surgical attack should be correlated with the clinical pathological extent of the disease in individual patient with the aim of removing all the disease presenting, and preserving the appearance and function to utmost.

The main goal remains removal of all the disease from the breast and regional nodes (Urban, 1978).

The choice of surgical procedures ranges from simple excision of the mass to the supraradical mastectomy with or without irradiation. The use of chemotherapy as an adjunct to primary treatment