Bio-chemical adjustment in patients with breast cancer

P. SENTHAMILSELVAN[1] AND **V. SIVAKUMARI**[2]
[1]Marudu Pandiyar College, THANJAVUR (T.N.) INDIA
[2]Department of Environmental and Herbal Sciences, Tamil University, THANJAVUR (T.N.) INDIA

Breast cancer is one of the most common cancers in developed and developing countries. In India, it is the second most frequent cancer, which is estimated to be 19.3% of total female cancer with age standardized rate 17.5 per 100,000.The exact cause of breast cancer is not completely known but presumably it represents a complex interplay of genetic susceptibility and environmental factors. Hematology, lipid and lipoproteins have also been associated with risk of breast cancer. The present study was carried out to investigate Total Cholesterol (TC), High Density Lipoprotein Cholesterol (HDL-C), Low Density Lipoprotein Cholesterol (LDL-C), Triglycerides' (TG), sodium, chloride, potassium, SGOT, SGPT, glucose, urea, uric acid and creatinine in female with breast cancer. In the study revealed significant difference between breast cancer and normal subject with respect to most of the biochemical parameter analyzed.

INTRODUCTION

Breast cancer is a growth of abnormal cells, usually within the ducts (which carry the milk to nipple) or lobules (glands for milk production) of the breast. In more advanced stages of the disease, these out-of-control cells invade nearby tissues or travel throughout the body to other tissues or organs. More than 178,000 women and 2,000 men are diagnosed each year with breast cancer, according to the American Cancer Society (ACS). For women, this rate is second only to non-melanoma skin cancer (Aboud –Pirak *et al.*, 1990).

Normal cell function requires these building blocks to divide and also to die when they grow old - allowing for new cells to take their place in an organized manner. When old cells do not die and the body continues to create new cells it does not need, a mass of cells form a growth or tumor. These tumors do not always signal caner, particularly in the breast (Harris, 1992).

Breast cancer begins with a growth of abnormal cell within the breast tissues. The type of breast cancer is determined by where the cancer began - in the ducts, the lobules or other areas, such as the connective tissue or in the blood vessels. It is also important to determine if the cancer has spread beyond the ducts or lobules and invaded nearby lymph nodes (Therwath, 1994).

Thus, when breast cancer starts to spread, the most common first location is the nearby lymph nodes. If breast cancer has spread to the axillary lymph nodes (located in the underarm region of the body), it can cause swelling of these nodes. After the cancer cells have spread to the lymph nodes it is more likely that the cancer will spread to other areas as well, such as the lungs, bones or brain (Jonrup, 1995).

Breast Cancer is the most frequently diagnosed malignancy in women world wide accounting for 23% of all cancer cases in women with 1.15 million in world wide. A thorough improvements in breast cancer detection treatment contribute to declining breast cancer – specific mortality rates over the last decade, the efficacy of standard systemic therapy is suboptimal ; women still experience relapses despite state –of-the-art adjuvant chemotherapy and hormonal therapy and distend metastic disease most frequently chemotherapy with novel, molecularly targeted therapeutics. However, is showing particular promise. The present study was undertaken to analyze various biochemical parameters such as hematology, lipid profile, kidney function, electrolytes glucose and uric acid in breast cancer patients.

MATERIALS AND METHODS

10 Breast cancer women subjects were taken up for the present study with the age group of 30 – 50 years. These subjects were selected on the basis of oral questionnaire from Thanjavur Medical College (TMC), Thanjavur District. Each people was subjected to detailed interrogation with special reference to marital status and duration of mother feeding. Equal number of women subjects with normal physical and mental health were selected to serve as normal subjects Table 1 shows the case history of perform/ questionnaire for breast cancer