FAMILIAL CHARACTERISTICS OF BREAST CANCER: A HOSPITAL BASED STUDY IN SRI LANKA

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Familial aggregation of breast cancer has been explained by inherited genetic susceptibility to breast cancer, effects of endogenous and exogenous environment and their interaction. Disease eausing allelic variants of major genes such as BRCA1 and BRCA2 are rare but the risk conferred by these genes is very high. These allelic variants are inherited, thus associated with early-onset disease and bilaterality. They are susceptible to a spectrum of cancers due to tissue specific expression of these major genes. Segregation of these genes demonstrates Mendelian inheritance. Allelic variants of genes that are involved in metabolism of endogenous and exogenous carcinogens cause differences in susceptibility to breast cancer. Studying the familial characteristics helps in understanding the aetiology of breast cancer. There are no published studies in relation to causative factors of familial aggregations of breast cancer among Sri Lankan patients. The Objective of the present study was to find out the familial characteristics of breast cancer among Sri Lankan patients.

A descriptive retrospective study was conducted in patients with a histological diagnosis of breast cancer. The study sample consisted of patients attending the oncology and surgical clinics in Kandy and Peradeniya during the period from 2001-2003. A three-generation pedigree including first and second degree relatives was constructed by interviewing the proband. This was extended to third degree relatives when necessary.

Of a total number of 147, family history of breast cancer was seen in 8% and family history of breast and associated cancers were seen in 13%. Premenopausal breast cancer was seen in 54% of which family history was found in 18%. There was no significant difference($p>0.05$) in the mean age at diagnosis between the patients without a family history of cancer (49 ± 10), patients with a family history of cancer (49 ± 12), and patients with a family history of breast cancer only (49 ± 12). In one patient (0.7 %) early – onset disease was associated with family history of cancer, bilateral breast cancer and multiple tumours. Association of breast and ovarian cancer was seen in one patient (0.7 %) with early-onset disease.

Characteristics associated with genetic susceptibility to breast cancer was encountered in 5-10%breast cancer patients in the present study. Confirmation of genetic susceptibility needs identification of genes involved as shared environment may be responsible for some of the cases found.