Laddering through pedigrees: family history of malignancies in primary breast cancer patients

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A family history (FH) of breast cancer (BC) is a long recognized risk factor for developing the disease. Also, there have been some reports of links between an FH and some other malignancies (mostly uterus, ovary, and prostate cancers), and an increased risk of developing BC. In this paper we present descriptive report of the occurrence pattern of malignancies in families of BC afflicted patients through 4 generations. Patients included 542 Iranian primary BC cases, presenting at an outpatient clinic for treatment and follow-up. Detailed pedigrees were drawn for each patient, and data for a total of 6220 relatives were gathered. Among the probands, 29.9% and 53.9% had a positive FH of BC and other malignancies (OM) respectively. Mean number of breast cancers was nearly double in maternal-lines versus paternal-line relatives. Also, occurrence of brain, uterus, and colorectal cancers was significantly higher in maternal-line relatives, but conversely, liver cancer showed a tendency toward paternal-line relatives (1st degree relatives excluded). The highest frequency of BC involvement was noted in 2nd degree/2nd generation, and 3rd degree/3rd generation relatives. For OMs, although gastric cancer was by far the most frequent OM across pedigrees, uterus cancer, and hematopoeitic system lesions (leukemia) predominated over gastric cancer through the 3rd and 4th generations respectively. We did not find any relation between having a positive FH of BC, and developing early-onset BC. The findings discussed in this paper were partially presented at the 18th UICC International Cancer Congress, Oslo-Norway, 30 June-5 July 2002.

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