ABSTRACT

A case control study was undertaken to determine the risk of breast cancer with oral contraceptive use and with certain selected variables. 516 biopsy confirmed, newly diagnosed patients with primary carcinoma of the breast constituted the cases, while the controls were 516 women matched for age (± 5 years to that of the case) without breast cancer living in close vicinity. A pre-tested, coded questionnaire was the instrument of data collection. Data collection was done by trained nursing sisters from 01-April,1991 to 30-November,1991. Data were collected from all provinces in Sri Lanka except the Northern and Eastern Provinces. Data collection was supervised by two supervisors who performed data editing as well. Edited data was fed into the computer. Tables were constructed, basic and multivariate analysis was done with computer assistance. Effects of potential confounding variables were guarded by multivariate adjustment. Finally model building was undertaken to find the important risk factors for breast cancer with oral contraceptive use as the independent variable. This study revealed that:

A) (i) The overall rate was 8.2 per 100,000 women.

(ii) The highest breast cancer rate was in the 45-49 years age group (39.4 per 100,000 women).

(iii) The lowest rate was in the 15 - 19 years age group (0.3 per 100,000 women).

(iv) 60 per cent of the cases occured before 50 years of age.

B) (i) The Western Province had a rate of 14.8 per 100,000 women compared to 0.9 per 100,000 women in the Central Province.

(ii) Colombo District recorded a rate of 18.3 per 100,000 women compared to 0.9 per 100,000 women in Kandy District.

C) Sinhalese women were not at an increased risk of breast cancer relative to women of all other ethnic groups.
(Relative risk = 0.74; 95% C.I.=0.44 - 1.23;
p - value > 0.05)

D) Never married women were not at an increased risk of breast cancer relative to ever married women.
(Relative risk = 1.08; 95% C.I.= 0.68 - 1.71;
p - value > 0.05).

E) (i) Although breast cancer occured more commonly on the left side than on the right side, (Left side to right side ratio = 1.04:1) the left breast was not at an increased risk of breast cancer than the right breast (p-value > 0.05).

(ii) In 1.9 per cent of the patients bilateral cancer of the breast was detected.

F) There was a significant difference in the presence of a positive family history in the controls than in the cases. This may be due to the fact that some first degree relatives of the cases would have entered the study as controls thereby yielding a significant relative risk in an opposite direction.

G. Early age at menarche (less than 12 years) did not increase the risk of breast cancer. (Relative risk = 0.79; 95% C.I. = 0.44 - 1.42; p-value > 0.05)

H) (i) At diagnosis 199 patients were pre-menopausal while 317 were in the menopausal state, a ratio of 1:1.6.

(ii) Late age at menopause (40 years and above) did not increase the risk of breast cancer relative to women who had menopause at age less than 40 years of age. (Multivariate relative risk = 0.9603;95% C.I. = 0.9161 - 1.007 and p-value > 0.05).

I) (i) Women who were never pregnant relative to women who were pregnant more than three times were at an increased risk of breast cancer. (Relative risk = 1.53; 95% C.I. = 1.03-2.29; p-value < 0.05).

(ii) Women who were never pregnant relative to women who were pregnant upto three pregnancies were not at an increased risk of breast cancer.

J) Women who had their first child birth at or above 25 years of age were at an increased risk of breast cancer relative to women who had their first child birth at less than 20 years of age. (Relative risk for 25-29 years = 1.94; p-value < 0.05; relative risk for 30 and above years = 2.92; p-value < 0.05).

K) Women who had a positive history of benign breast disease were at an increased risk of breast cancer relative to women who did not have such a history. (Multivariate relative risk = 3.522; 95% C.I. = 1.260-9.839; p-value < 0.05)

L) Oral contraceptive users were not at an increased risk of breast cancer relative to non users. (Multivariate relative risk = 0.3820; 95% C.I. = 0.1277 - 1.143; p-value > 0.05).

M) Model building done for risk of breast cancer with oral contraceptive use, as the independent variable showed that the following risk factors significantly increased the risk of breast cancer.

(i) Age of the mother at first child birth (Multivariate relative risk= 1.072; p-value < 0.001).

(ii) Benign breast disease (Multivariate relative risk = 4.243; p-value < 0.001).