

**AMMOGRAPHIC BREAST DENSITY PATTERNS, DURATION OF BREAST FEEDING, AND NUMBER OF BREAST FED CHILDREN AMONG HISTOLOGICALLY PROVEN BREAST CANCER PATIENTS**

**P.B. Hewavithana<sup>1</sup>, G. Hettiarachchi<sup>2\*</sup>, K.B. Galketiya<sup>3</sup>, P.V.R Kumarasiri<sup>4</sup> and K. De Silva<sup>5</sup>**

<sup>1,2</sup>*Department of Radiology, Faculty of Medicine, University of Peradeniya, Sri Lanka*

<sup>3</sup>*Department of Surgery, Faculty of Medicine, University of Peradeniya, Sri Lanka*

<sup>4</sup>*Department of Community Medicine, Faculty of Medicine, University of Peradeniya, Sri Lanka*

<sup>5</sup>*Onco Surgical Unit, General hospital, Kandy, Sri Lanka*

*\*gothamih@hotmail.com*

The incidence of Breast cancer in Sri Lanka is increasing annually and the Age Standardized Rate per 100,000 populations for female breast cancer was 18.3 per 100,000 for the year 2005. The breast parenchymal density on mammography has been found to be linked with development of breast cancer. In 1976, Wolfe assigned four parenchymal density types N1, P1, P2 and DY, which indicated the proportion of adipose tissue, duct pattern, and volume of glandular elements. The aim of this study was to find out the association between mammographic breast density, duration of breast feeding, and number of breast fed children on the development of breast cancer.

The study was based on data of patients with histologically proven breast cancer (n=185) and age matched asymptomatic patients with normal mammograms (n= 200) who attended a private mammography facility in the Kandy district during the period 2002 to 2013. Data on breast parenchymal patterns on mammography, factors contributing to breast density such as the number of breast fed children, and the duration of breast feeding were obtained from the archives. Data were analyzed by SPSS 16.0 version

Individuals with breast density type (P2+DY) had carcinoma of breast in 55% and N1 type had 42%. There was no statistically significant association between the breast density pattern and breast cancer ( $P = 0.50$ ). Among the patients with breast cancer 17%, 4%, 16%, 63% and among the controls 15%, 9%, 20%, 56% had breast fed their children for 0-6, 6-12, 12-24, and >24 months, respectively. The number of breast fed children 0, 1, 2, 3 and 4 were 11%, 12%, 45%, 17%, and 15%, respectively among cancer subjects, and 11%, 15%, 41%, 24%, and 10%, respectively among the non-cancer subjects. The association between the number of breast fed children and duration of breast feeding with carcinoma of breast was not statistically significant ( $P=0.346$ ,  $P=0.126$ , respectively).

Wolfe's study revealed that there was a higher risk in developing breast cancer among the patients with P2 (1.7%) and DY (2.2%) types when compared to N1 (0.1%). But our study did not show a similar risk among (P2+DY) and N1 types. The duration of breast feeding and the number of breast fed children have shown to be inversely related to breast cancer in western countries. However, there was no such association in our study.

In conclusion, there was no statistically significant association between the type of mammographic breast density, duration of breast feeding and number of breast fed children with carcinoma of breast in our study sample.