Abstract No: 286 (Poster)

Health and Hygiene

THYROID PROFILES OF NEWLY DIAGNOSED FEMALE BREAST CANCER PATIENTS

H.M.K Akalanka¹*, S. Ekanayake¹ and K. Samarasinghe²

 ¹Department of Biochemistry, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka
² Department of Pathology, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka *kasuniakalanka@gmail.com

Breast cancer is the commonest cancer among Sri Lankan women and women world over. Potential associations between thyroid profile abnormalities and breast cancer risk has long been subjected to debate. It has been found that T3 levels of postmenopausal women are positively associated with breast cancer risk. However, no such data is available for Sri Lanka. This study was designed to analyze the thyroid profile of newly diagnosed breast cancer patients in Sri Lanka.

Sixty eight (68) newly diagnosed female breast cancer patients were recruited for the study from the Cancer Institute Maharagama and hospitals in the private sector after consent was obtained. The thyroid profile (T3, T4 and TSH) was analyzed using immune turbidometric measurements using mini VIDAS immune analyzer. Patients who were on treatment for thyroid disorders were excluded. Statistical software, SPSS version 16 was used for statistical data analysis (Ethical approval 651/12).

Fifty percent of women were post menopausal. Eight percent of participants had different thyroid disorders. T3, T4 and TSH concentrations of the patients (n=62) were 2.65 pg/mL (SEM 0.06), 1.15 ng/dL (SEM 0.03) and 2.66 mIU/L (SEM 0.33), respectively. A significant difference in the thyroid profiles between pre- (32%) and postmenopausal (68%) women was not observed (p>0.05). Majority of the breast cancer patients (77%) had TSH within the normal reference range (0.3-5 mIU/L). However, 69% of them had TSH closer to the lower reference limit. 5% had TSH below the lower reference margin and among them 66% were post menopausal women. Among 18% of total population, TSH concentrations were above the reference margin where 82% were post menopausal women. In 92% of patients the T3 concentrations were within the normal reference range (2.08-6.74pg/mL) and the rest had T3 below the lower reference range in which 60% were post menopausal breast cancer women. With respect to T4 concentrations 98% were within the normal reference limits (0.8-2.3 ng/dL).

The current study shows that a majority of breast cancer patients had TSH levels closer to the lower reference margin and all patients (pre and post menopausal) had T3 concentrations below or closer to the lower reference range while some breast cancer patients had subclinical hypothyroidism but were unaware of it. Further studies are being carried out to detect possible association between risk of breast cancer and thyroid profile abnormalities.

Financial assistance given by University of Sri Jayewardenepura, (ASP/O6//RE/MED/2012/20) is acknowledged.