Imbalance Diet: A Risk Factor for Thyroid Cancer

Pages with reference to book, From 130 To 130

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Health care for the community includes not only proper diagnosis and appropriate treatment of the disease but development of preventive strategies is also a vital component of it. There is a famous saying “Prevention is better than cure.” While spending a significant amount of resources for the achievement of better disease control through the improvement in the management of diseases, it would be appropriate to adopt the preventive measures for the control of human ailments. Environmental exposure and genetic susceptibilities play a significant role in the occurrence of disease[1].

Food intake is one of the important type of contact with the environment. Whatever we eat or drink, it will result in body exposure to numerous micronutrients. Low unabsorbable vegetable fiber content in the diet increases the risk of colorectal carcinoma[2]. Similarly occurrence of many other cancers has been associated with the improper and imbalance diet. Cancer is becoming an increasingly serious problem all over the world. In developing countries like Pakistan, the major health problems include infectious and communicable diseases and malnutrition. But in absolute numbers, there are more cases and increased mortality due to malignant neoplastic lesions in the developing countries as compared to developed nations[3]. It could be attributed to the increased population of these countries. For the prevention and control of cancer, it is very important to find out the potentially preventable risk factors. Thyroid cancer is relatively more prevalent in young females. Like gall bladder carcinoma, it is one of the common non-sex related site malignancy in females as compared to males[4,5]. The variation in the geographical distribution of thyroid cancer shows its possible association with environmental and genetic factors. A case control study of thyroid cancer conducted in Italy has shown that poor diet accounted for 40.9% of thyroid cancer cases[6].

The association of thyroid cancer with high starch intake and diet poor in vegetables and fruits has been observed in the other series[7,8]. Fruits and vegetables contain antioxidants like vitamin C, vitamin E and beta-carotene. Polypheno’ is present in green tea while tomato is rich in lycopene. These antioxidants neutralise the free radical produced from toxic agents. Similarly cauliflower contains sulforanphane, which promote the production of phase II enzymes. Carcinogenic metabolites are destroyed by these enzymes[1]. In this way vegetables and fruits reduce the risk of cancer. The balance diet not only reduces the risk for thyroid cancer but risk of other diseases will be reduced as well. High starch diet may be poor in iodine, which is an established risk factor for the malignant and benign thyroid disorders[6]. High content of iodine in diet is also a risk factor for thyroid cancer. People living in areas where iodine level is high in water or in diet are more at risk of development of thyroid cancer[9]. Introduction of iodinated salt in region where iodine content is high in food or in water would augment the risk. In this regards, more awareness is required in the community. Medical professionals with the help of electronic media can play a vital role.

Reference

1. Perera FP. Environment and cancer: who are susceptible. Science, 1997;278: 1068-73.
2. Cotran RS, Kurnar V, Collin T. Robbin’s pathologic basis of disease. 6th ed. Philadelphia, W.B, Saunders Company, 1999, pp. 306-9.
3. Selby P. The role of TUCC in cancer prevention. Ornar YT, Gjorgor A, Ismail AS Cancer prevention

in developing countries. Proceedings of the second UICC conference on cancer prevention. Kuwait 1986, pp 3-7.
4. Memon MH, Memon I, Memon RA. The changing pattern of malignant diseases in Sind Province. Pak.J.Pathol., 1992,3:17-20.
5. Ahmed J, Hashmi MA, Naveed IA, et al. Spectrum of malignancies in Faisalabad 1986-90. Pak.J. Pathol., 1992;3: 103-10.
6. Floretti F, Tavani A, Gallus S, et al. Case control study of thyroid cancer in Northern Italy: Attributable risk. Int J Epideiniol 1999:28:626-30.
7. Franceshi 5, Levi F, Negri E, et a1. Diet and thyroid cancer: a pooled analysis of four European case-control studies. Int. J. Cancer; 1991;48:395-98.
8. Franceshi S, Fassina A, Tolamini R, et al. Risk factor for thyroid cancer in Northern Italy. lnt. J. Epidemiol; 1989:18:578-84.
9. Goodman MT. Yoshizawa CN, Kolonci LN. Descriptive epidemiology of thyroid cancer in Hawii. Cancer: 1988:61: 1272-81.