Letter to the Editor

Vitamin B₆ and Its Effect on Systemic Carcinogenesis

To the Editor:

The recent article by Okazaki et al. provided for highly stimulating and interesting reading (1). Vitamin B₆ may attenuate the risk of development and progression of other systemic malignancies.

For instance, vitamin B₆ reduces the risk of developing breast malignancies. In one recent study, the odds ratio was 0.46 for the highest quartile versus lowest quartile for dietary vitamin B₆ consumption (2). Zhang et al. have confirmed this in another recent study (3). Interestingly, the estrogen receptor as well as the progesterone receptor status of the patient does not influence this negative impact of vitamin B₆ on breast cancer risk. Serum vitamin B₆ levels also influence the risk of developing pancreatic malignancies. The risk of developing pancreatic cancer is reduced in an inverse proportion to serum vitamin B₆ levels in individuals not consuming any multivitamins. An odds ratio of 0.8 was observed in one recent study (4).

A negative relationship is also seen between vitamin B₆ metabolism and the risk for pulmonary malignancies. Pyridoxal kinase plays a vital role in these antineoplastic effects (5). In addition, vitamin B₆ augments the chemo-sensitivity of lung cancers to other chemotherapeutic agents such as cisplatin. In patients with non-squamous cell lung carcinomas a direct relationship is observed between clinical prognosis and pyridoxal kinase levels. Vitamin B₆ levels also influence the risk of carcinogenesis in cervical tissue. For instance, low vitamin B₆ levels have been noted in patients with cervical carcinoma (6).

The above examples clearly illustrate the possible role of vitamin B₆ in mitigating systemic carcinogenesis and the need for further studies to look into this aspect of oncology.

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REFERENCES


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