

Coorelation between serum squamous cell carcinoma antigen level and tumor volume in head and neck cancer

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Background: Tumor marker in head and neck cancer is one of the most investigated areas. Squamous cell produces squamous cell antigen(SCC-Ag) which is expected to be higher in cancer. Level of SCC-Ag associated to cancer prognosis has been shown in literatures. The investigators conducted the first study determining correlation between SCC-Ag level and tumor volume in head and neck cancer.

Materials and Methods : SCC-Ag level of the patients was measured from venous clotted blood. Tumor volume was calculated by the typical ellipsoid formula. The tumor width, length, and height were measured from CT scan. Correlation between SCC-Ag level and tumor volume was analyzed.

Results : Fifty-two patients, 50 male and 2 female, were studied. Mean age of patients was 62.4 year. Tumor subsites were oral cavity cancer 11 cases (21.6%), oropharyngeal cancer 21 cases (40.38%), hypopharyngeal cancer 8 cases (15.7%), and laryngeal cancer 12 cases (23.5%). Differentiation of tumors were well differentiated 20 cases (38.4%), moderate differentiated 27 cases (52.9%), and poorly differentiated 5 cases (9.8%). Mean of tumor volume was 20.013 mL³ with 0.02-91.46 mL³ in range. Critical point of tumor volume was 30.8 mL³. Mean of SCC-Ag was 2.69 ng/mL with 0.5-14.6 ng/mL in range. Critical point of SCC-Ag was 5.8 ng/mL. Tumor volume in head and neck cancer significantly related to SCC-Ag by Pearson's product-moment correlation with P value = 0.0002213 and 52.4% correlation (moderate level).

Conclusions : Study of head and neck tumor volume and SCC-Ag level demonstrated moderate correlation.

Biography

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