**Title:**

Assessment of role of eosinophils in the progression of tongue carcinoma

**Abstract:**

**Background and objectives:**

Tumor associated tissue eosinophilia (TATE) is known as stromal infiltration of eosinophils in the stroma of tumor not associated with tumor necrosis or ulceration. It has been described in a variety of neoplasms, but the role in oral squamous cell carcinoma (OSCC) of tongue has not yet been clearly defined. Association of TATE with OSCC has shown variable results ranging from favorable to unfavorable or even no influence on prognosis. The aim of the present study was to correlate TATE with histopathological grades, lymph node status, tumor thickness and nature of tumor cells at the invasive front in OSCC of tongue.

**Material and Methods:**

Retrospectively fifty six cases of OSCC of tongue treated with radical neck dissection were included, which were divided into Group I consists 22 cases (lymph node with metastasis) & Group II consists 34 cases (lymph node without metastasis). H & E stained sections were used to analyze TATE and compared with histopathological grades, lymph node status, tumor thickness and nature of invasive front. Statistical analysis was done using Chi- Square test.

**Results:**

TATE did not have any significant association with histopathological grades lymph node status and nature of tumor cells at invasive front. But, tumor thickness and presence of eosinophils showed significant association. Also as the tumor thickness increased, the cells were more discohesive at the invasive front region.

**Conclusion:**

Microenvironment of tumor significantly contributes in the tumor progression. Tumor invasive front, nature of tumor cells at the invasive front and TATE together can help in assessing the behavior of tongue squamous cell carcinoma.

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**Key words:**

Eosinophils, invasive front, metastasis, tongue, tumor thickness

**Running title:** Role of eosinophils in the progression of carcinoma

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