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EDITORIAL

Prognostic Significance of Invasive Tumor Front in Oral Squamous Cell Carcinoma

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Tumor, Node, and Metastasis (TNM) classification dictates treatment planning for oral squamous cell carcinoma (OSCC). This system stages tumor on the principle that smaller size tumors have a better prognosis than larger tumors with local or distant spread. It has been brought to light that many tumors with similar clinical staging show different clinical behavior and growth patterns. This results in difficulty in predicting the prognosis for patients with OSCC on the basis of clinical staging alone.[1]

The invasive tumour front (ITF) has been defined as "the most progressed, three to six tumour cell layers or detached tumour cell groups at the advancing edge of the OSCCs."[2] Loss of cohesion and marked anaplasia is usually observed at the ITF in comparison with other parts of the tumor. The ITF can be used as a prognostic indicator as it is believed to indicate the tumors' invasive and metastatic capacity.[3]

The significance of ITF as a prognosticator has been demonstrated in several studies involving OSCCs.[4] The tumor–host interface or invasive front is the site for molecular events such as increased proliferation, neoangiogenesis, and loss of adhesion molecules which is supported by several studies.[4]

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The ITF is composed of aggressive cells with maximal cellular atypia. Biologic aggressiveness of a tumor is well defined at the ITF. In cases of difference of opinion among pathologists regarding the grade of OSCC, the differentiation at the ITF is considered.

Useful information is obtained when selecting treatment strategies for oral cancer patients as the presence of cancer cells at the ITF in conjunction with clinical findings is taken into consideration.[5] Reduced E-cadherin expression at the ITF and its association with histological invasiveness suggest that this protein is a noteworthy epithelial mesenchymal transition marker in OSCC.[6] Research focusing on expression of novel markers at the ITF is an interesting prospect.

The prognosis of a tumor is reflected best in the ITF compared with any other region of the tumor. The ITF must be considered as a part of staging systems to more accurately assess OSCC in terms of treatment planning and recurrance.

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