Letter to the Editor

Diagnostic capability of salivary biomarkers in the assessment of head and neck cancer

Salivary biomarkers have high discriminatory value for various diseases [1]. Research have proven that the salivary biomarkers have good diagnostic potential in oral squamous cell carcinoma (OSCC). Guerra et al. have evaluated the diagnostic value of salivary biological markers in the diagnosis of head and neck carcinoma. The article is an excellent concise of the relevant informations on salivary biomarkers [2].

The authors have rightly emphasized the point that combination of biomarkers have better accuracy than those tested individually [2]. The combination of markers from the proteome and transcriptome yielded the highest predictive power for OSCC [1]. This may be due to the fact that the pathogenesis of oral squamous cell cancer is multi-factorial and heterogenic [1]. The discriminatory power of multiple biomarkers is increased to the high performance of combined biomarkers than individual biomarkers [1]. The discriminatory power of the combination of transcriptomic and proteomic salivary biomarkers and performance in early (T1–T2) and late (T3–T4) stages OSCC is shown in the study by Brinkmann et al. [1].

1256 protiens were identified from normal human saliva including 292 novel identification [3]. More than 20% of the salivary proteins are implicated in oral cancer. These biomarkers could play an important role in early detection of OSCC. 3 The validation of biomarkers like interleukin (IL)-8 and subcutaneous adipose tissue (SAT) showed their feasibility in the discrimination of OSCCs from healthy controls [4]. They aid in differentiation of potentially malignant oral lesions and oral squamous cell carcinoma [5].

OSCC is frequently associated with poor prognosis and mortality and is a leading cause of cancer-related death worldwide [6]. The elevated levels of salivary RETN were highly correlated with late-stage primary tumors, advanced overall stage, and lymphnode [6]. Interleukins as biomarkers have role in mortality and recurrence in oral cancer [7]. Thus salivary biomarkers could be useful in early diagnosis, delivering individualized cancer therapy and predicting prognosis of head and neck cancer.

The gold standard for the diagnosis of OSCC is a biopsy of the suspicious lesion but it is not always feasible for screening purposes for early oral cancer [1]. The discriminatory power of salivary biomarkers will open up new avenues in oral cancer diagnosis.

References

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