

Research paper 9

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correlation of salivary gland cytology with the evaluation of the Milan system for risk of malignancy: an institutional prospective study

A. Gupta, S. Chandra, P. Singh, N. Anand

Department of Pathology, Dr. Ram Manohar Lohia Institute of Medical Sciences, Lucknow, India

Introduction and objectives: Cytology plays an important role in the preoperative management of salivary gland lesions. The present study was carried out from January 2018 to December 2020 to evaluate the diagnostic efficacy and utility of the Milan System for Reporting Salivary Gland Cytopathology (MSRSGC).

Methodology: 192 salivary glands FNA were performed in two years, with histology follow-up available for 72 cases (30.4%). The cytology diagnoses were categorized using MSRSGC as non-diagnostic (category I), non-neoplastic (category II), atypia of undetermined significance/AUS (category III), benign neoplasms (category IVA), salivary gland neoplasm of uncertain malignant potential/SUMP (category IVB); suspicious for malignancy/SFM (category V); and malignant (category VI). The ROM for each diagnostic category was determined. The performance parameters of cytology and ROM were calculated with histopathology as a gold standard.

Results: The sensitivity, specificity, negative predictive value, and positive predictive value of salivary gland FNA specimens were 96.4%, 91.9%, 91.9%, and 90%, respectively. The ROM/overall ROM (with total cytology cases as the denominator for each Milan category) for non-neoplastic, AUS, benign neoplasms, SUMP, SFM, and malignant were 0/0%, 25/20%, 9.1/3.9%, 75/27.3%, 66.6/50%, and 100/58.1%, respectively. The ROM for the nondiagnostic category could not be calculated due to the absence of follow-up.

Discussion: In our patients, MSRSGC resulted in high PPV and NPV. The ROM for each Milan category reported in our institution is within the ranges reported in other studies.

Conclusion: MSRSGC helped better communication between cytopathologists and clinicians, resulting in better patient care. This study using the Milan system has provided a better insight into the usefulness of the proposed nomenclature. The inclusion of indeterminate categories in the Milan system can guide to use of ancillary techniques optimally in the diagnosis of salivary gland neoplasms.

Keywords: cytopathology, fine needle aspirate, Milan system, salivary gland

Corresponding author: Dr A Gupta

Department of Pathology, Dr. Ram Manohar Lohia Institute of Medical Sciences,
Lucknow, India

ganuragdr@gmail.com



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