Early diagnosis of oral potentially malignant & malignant lesions by OPN - An immuno-histochemical study

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Objectives: Studies indicate the immunolocalization of human osteopontin (OPN) in human pathologies. Despite new diagnostic techniques in evaluation of oral lesions, rate of transformation and prognosis largely remains obscure. This study compared and correlated the expression of OPN with prognostic factors in normal epithelium, mild dysplasia, severe dysplasia, Oral Lichen Planus (OLP), Oral Submucous Fibrosis (OSMF) and Oral Squamous Cell Carcinoma (OSCC).

Study Design: A total of 350 cases, 50 each of normal oral tissues, mild, moderate, & severe dysplasia, OLP, OSMF and OSCC were selected. The normal human oral mucosa samples were collected from tooth extraction sites and human cadavers. The remaining cases were the biopsies from different sites of oral cavity. The staining was evaluated in epithelial layers in cases of OLP, OEDs, OSMF, and in tumor islands in case of OSCC. The immune-staining distribution was considered positive in any one or all of the layers when more than 70% of the cells were positive for osteopontin. The OSCC samples were further graded into well differentiated, moderately differentiated and poorly differentiated squamous cell carcinoma. The clinical data were retrieved from the medical records. The immunopositive reaction and score for each case was evaluated. Expression of OPN was correlated with clinical findings.

Results: In mild and moderate dysplasia, OPN expression was confined to basal cell layer with moderate intensity. OLP showed expression in basal and middle cell layers with varied intensity. The expression was strong throughout whole epithelium in severe dysplasia. OPN expression with moderate intensity in basal cell layers was observed in OSMF. The expression was very strong in OSCC.

Conclusion: This study suggests potential role of osteopontin in prognosis of oral lesions.

Biography
Nasir Ahmed Salati is currently working as Assistant Professor in Oral Pathology/Oral Medicine & Radiology department of Dr. Ziauddin Ahmad Dental College, AMU, Aligarh, India. He is involved in teaching Oral Pathology, Oral Medicine, Histopathology, Oral Microbiology and Clinical Oral Pathology. His areas of interest and research are: Special stains, immunohistochemistry, FNAC, salivary gland histochemistry & cryosurgery. He has published in various journals of international repute.

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