

Evaluation of the immunohistochemical expression of the interleukin-1 signaling pathway in oral cancer: preliminary results

Felipe Martins,  0000-0001-9834-5194

Estefanía Sicco,  0000-0003-1137-6866

Vanesa Pereira,  0000-0001-7747-6718

Jimena Hochmann,  0000-0002-0875-2333

Gilfredo González,  0000-0002-0563-4948

René Martínez,  0000-0002-0800-8117

Sven Nicklander,  0000-0003-1858-3091

Ronell Bologna,  0000-0001-9755-4779

DOI: 10.22592/ode2023nesp1e592



Resume

Objectives. Interleukin-1 (IL-1) is a family of cytokines that regulate inflammation by controlling a variety of innate immune processes. This study aims to evaluate the immunohistochemical expression of members of the IL-1 family in oral squamous cell carcinoma (OSCC) and determine its association with clinicopathological features.

Methods. The immunohistochemical expression of IL-1 α , IL-1 β , IL-1RA and IL-1R1 in the tumor invasion front (TIF) of 47 OSCC cases was evaluated. Immunoexpressions were evaluated according to histological grade, perineural invasion, recurrence, and clinical stage.

Results. The TIF of all OSCC cases were positive with degrees of immunoexpression ranging from moderate to severe for IL-1 α (1.93 ± 0.87), IL-1 β (2.09 ± 0.83), IL-1RA (2.5 ± 0.71) and IL-1R1 (2.02 ± 0.84). There was a higher proportion of cases with high expression of IL-1RA (62.5%). A statistically significant association was found between low IL-1 α immunoexpression and greater recurrence ($p=0.018$). No significant association was observed between the other members of the IL-1 family and any of the prognostic factors evaluated.

Conclusions. The results of this study suggest that decreased tissue expression of proinflammatory factors of the IL-1 family can be related to increased recurrence in OSCC cases. However, its role seems to be more relevant in the etiopathogenesis of the disease than in its prognostic factors.

Key words. Oral squamous cell carcinoma, oral cancer, immunohistochemistry, interleukin-1, recurrence, prognostic

Universidad Andrés Bello, Chile y Universidad de la República, Uruguay

Autor de correspondencia: fp.martins@gmail.com

XVIII Reunión Anual de la Sociedad Uruguaya de Investigación Odontológica