

**Abstract** Claudins constitute a group of principal proteins forming the tight junctional complex. The altered expression of selected claudins has been reported in several human cancers. The purpose of this study was to investigate the expression of claudin-1 and claudin-4 in oral squamous cell carcinoma (OSCC) and examine its relationship with patient clinical-pathologic features. Forty-five OSCC cases were enrolled. Patient clinical, pathologic and follow-up data were reviewed and the claudin-1 and claudin-4 expression was analyzed immunohistochemically. Positive claudin-1 and claudin-4 immunoreactivities were noted in 86.7 and 80 % of cases, respectively. The majority of cases showed the staining in less than 25 % of cancer cells. The increased claudin-1 expression was significantly associated with the high pathologic grade, the presence of microscopic perineural invasion, vascular invasion, nodal metastasis, and advanced clinical stage. No relationship between various clinico-pathologic parameters and differential claudin-4 expression was observed.