

Comparison of immunohistochemical markers between adenoid cystic carcinoma and polymorphous low-grade adenocarcinoma.

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Abstract

Adenoid cystic carcinoma (AdCC) and polymorphous low-grade adenocarcinoma (PLGA) have several common histological and clinicopathological features that may create diagnostic difficulties. In this study, 10 AdCCs, 10 PLGAs, and 10 normal minor salivary glands as a control group were selected. Sections prepared from each tumor were stained using the streptavidin-biotin system for seven marker antigens: carcinoembryonic antigen (CEA), epithelial membrane antigen (EMA), muscle-specific actin (MSA), vimentin, S100, p63, and Ki-67. Data analysis showed high expression of CEA, MSA and Ki-67 in AdCCs compared with PLGAs, although CEA expression was limited to luminal cells. Ki-67 was expressed in both luminal and non-luminal cells and MSA only in non-luminal cells. Vimentin and S100 showed stronger expression in PLGAs, the expression of vimentin was more noticeable, being focal and widespread. The immunoreactivities of EMA and p63 were not helpful for distinguishing between the two tumors, although the EMA expression pattern in AdCCs was limited to luminal cells, whereas it was present in both luminal and non-luminal cells in PLGAs. Thus, immunohistochemistry can be helpful for differential diagnosis of AdCC and PLGA, particularly that for CEA, vimentin, and Ki-67.

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