Mammary analogue secretory carcinoma of salivary glands: diagnostic pitfall with distinct immunohistochemical profile and molecular features.

Mammary analogue secretory carcinoma (MASC) is a newly defined entity among salivary gland malignancies which has just been established in the 4th edition of the WHO classification of head and neck tumors. MASC (synonym: secretory carcinoma) are characterized by a specific rearrangement of the ETV6 gene locus. Here, we present a series of 3 MASC cases including clinical data with follow-up for up to 26 months. All tumours immunohistochemically displayed strong positivity for cytokeratin 7, and mammaglobin, focal positivity for S100, cytokeratin 5/6 and muc-4. In contrast, immunohistochemical stainings against cytokeratin 14, hormon receptors, Her2/neu, androgen receptor and prostate-specific antigen were consistently negative. FISH analysis showed translocation of the ETV6 gene locus in the majority of tumour cell nuclei. During clinical follow-up, no local relapse or metastasis was detected. As these carcinomas are clinically and radiologically indistinguishable from other salivary gland tumours and as therapeutic approaches and prognosis might differ, we need to be able to diagnose MASC correctly.