



Empire Genomics Aids in Analysis of Human Papillomavirus-Related Multiphenotypic Sinonasal Carcinoma

Background

Human papillomavirus (HPV)-related multiphenotypic sinonasal carcinoma (HMSC) is an unusual sinonasal tract tumor that demonstrates features of both a surface-derived and salivary gland carcinoma and is consistently associated with high-risk HPV. This case study presents the longest follow-up of any published HMSC; a 30-year interval between tumor recurrence provides evidence that despite high-grade morphology, HMSCs are paradoxically indolent in behavior.

Objectives

Researchers investigated a case of HMSC that was initially classified as adenoid cystic carcinoma in the 1980s. Recurrence occurred after a 30-year interval of freedom from disease. Cytogenetic analyses were carried out to assess characteristics of the condition, both presently and from the 1980s, and reclassification of disease was made possible. The case adds to the literature of a relatively newly described and poorly understood condition, supports key aspects of the disorder, and demonstrates the possibility of unusually late local recurrence.

Approach

Analyses included immunohistochemical studies on paraffin-embedded tissue utilizing a variety of antibodies, HPV testing by RNA in situ hybridization using the RNAscope method, and break-apart fluorescence in situ hybridization (FISH) for MYB using probes manufactured by Empire Genomics.

Results

The tumor was described as having unusual morphologic appearance. RNA in situ hybridization using the high-risk HPV probe set and HPV type 33-specific probe were both positive in the surface dysplasia and salivary gland components, and FISH for MYB was intact. The tumor from the 1980s was compared to the current tumor and found to be very similar, based on several analyses, including those utilizing technology from Empire Genomics. At 30 years, this case represents the longest follow-up of any published HMSC, and clinical course between tumor recurrences confirms the potential for very late recurrences, in spite of the paradoxical indolent behavior in light of high-grade morphology.

Human Papillomavirus-Related Multiphenotypic Sinonasal Carcinoma: A Case Report Documenting the Potential for Very Late Tumor Recurrence
Head and Neck Pathology, February 2018

Lead Organization

Cleveland Clinic Foundation

Diseases

- Human papillomavirus (HPV)-related multiphenotypic sinonasal carcinoma (HMSC)

Biomarkers Mentioned

- MYB