A Rare Case of Primary Cutaneous Mucoepidermoid Carcinoma

Hassie Cooper, DO, PGY-3, Maheera Farsi, DO, FAAD, Pay Kamrani, OMS-4, Richard Miller, DO, FAOCD, Dudith Pierre-Victor, PhD, MPH | HCA Healthcare/USF Morsani College of Medicine GME Programs

Introduction

- Mucoepidermoid carcinoma (MEC) is a well-documented malignant tumor commonly found in the salivary glands. Cutaneous involvement is very rare, especially when presenting as a primary cutaneous neoplasm. Gallagher first described primary cutaneous MEC in 1959 and since then, to the best of our knowledge, there have been approximately 20 reports published in the literature. Here we present a very rare case of primary cutaneous mucoepidermoid carcinoma.

Case Report

- An 89-year-old male with a history of multiple non-melanoma skin cancers and prostate cancer presented with a four-month history of a painful, bleeding, enlarging 1.3cm ulcerated erythematous plaque on the right malar cheek (Figure 1). Clinically, a basal cell carcinoma was suspected, and excisional biopsy was performed. Histopathologic examination revealed a deeply infiltrative carcinoma with squamoid and glandular features extending down from the epidermis (Figures 2 and 3). The glandular component was confirmed with positive staining with CK7 and CAM5.2 (Figure 4). Mucin-producing cells were confirmed with mucicarmine stain (Figure 5). The diagnosis of primary cutaneous mucoepidermoid carcinoma was made with free margins. Close interval clinical follow-up was recommended to monitor for any new lesions.

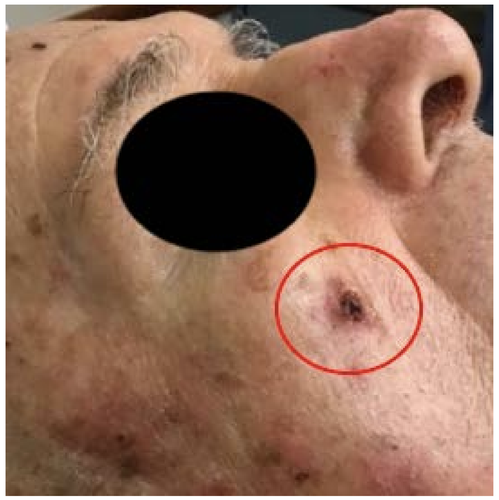


Figure 1: 1.3 cm ulcerated erythematous plaque on the right malar cheek

Histology

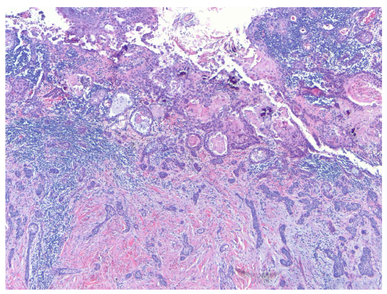
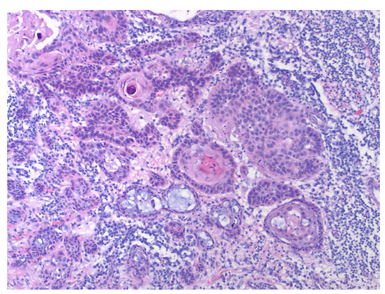
- 


Figure 2 (left): Nests of irregular epithelioid cells and mucin-producing cells in a fibrotic dermis
Figure 3 (right): 10X - atypical epithelioid cells and mucin-producing cells

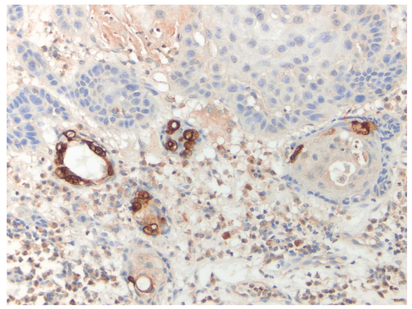
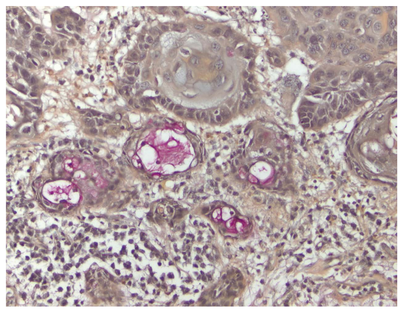
- 


Figure 4 (left): Positive CAM 5.2 stain
Figure 5 (right): Positive mucicarmine stain

Discussion

Mucoepidermoid carcinoma (MEC) is a carcinoma with both mucus-secreting and epidermoid components. It contains 3 cell types: epidermoid, mucus-secreting, and intermediate cells. MEC most commonly arises in the parotid gland but can also develop in the lacrimal glands, sinonasal tract, esophagus, bronchi, thyroid, breast, pancreas, prostate, and skin. MEC arising in the skin can either be a metastatic or primary process.

Primary cutaneous mucoepidermoid carcinoma (PCMEC) is an extremely rare phenomenon, and is thought to arise from ectopic salivary glands derived from sweat glands. It typically presents as an ulcerated flesh-colored nodule, most commonly occurring on the head of males greater than 50 years old. Distinguishing between PCMEC and metastatic MEC is very important, as it has implications for prognosis and treatment. Differentiating between a primary vs. metastatic process involves histologic examination to grade the tumor, utilizing specific stains such as p63, CAM5.2, CK7 and mucicarmine as part of the diagnostic process.

Treatment typically involves surgical excision, with high-grade tumors warranting additional imaging to evaluate for cutaneous extension from an underlying structure or for metastasis from a distant site. Reporting of additional PCMEC cases in literature is important to further understand the behavior of these rare tumors to optimize prognosis and treatment.

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