

Original Article

Primary Mucinous Carcinoma of the Skin (Colloid Carcinoma of the Skin) Report of a Case and Brief Diagnostic Algorithm

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Abstract

Colloid Carcinoma is a rare malignancy in a cutaneous location. Although its histological features are characteristic, it is necessary to rule out an extracutaneous primary. We report a case of mucinous carcinoma in the skin with an emphasis on histology and differential diagnosis.

Keywords

Carcinoma; Colloid Skin; Mucinous

Abbreviations

CT	:	Computerized Tomography
EMA	:	Epithelial Membrane Antigen
HE	:	Hematoxylin-Eosin
PAS	:	Periodic Acid Schiff
PSA	:	Prostatic Specific Antigen

Introduction

Colloid Carcinoma is a primary cutaneous extremely rare malignancy whose diagnosis must rule out a primary origin in different locations where their finding is more common. We present a case that reflects all the features of this singular entity.

Case Report

It is a 74 year old woman patient who went to the Department of Surgery due to the presence at right armpit level, of a progressive growth pseudonodular mass, with focally ulcerated surface. Excisional biopsy was performed and

surgical specimen was submitted to the Pathology Unit where it was processed according to routine protocols. The lesion showed an irregular ulcerated surface and global gelatinous appearance (Figure 1). Histological study allowed the observation of a focally ulcerated epidermis due to infiltration by an invasive epithelial lesion set in the dermis (Figure 2). Such neoplasia consisted of large lakes of mucinous material within which nests, trabeculae and tubular formations, (some with a cribriform pattern) of epithelioid basaloid habit with little or no atypia and low mitotic activity (Figures 3-5) were visible. Mucinous material stained with PAS while neoplastic epithelial nests were positive for cytokeratin 7 (Figure 6), cytokeratin 19 and EMA (Figure 7). Neoplastic cells were negative for cytokeratin 20. Morphological and immunohistochemical data and pattern clearly invasive allowed the diagnosis of mucinous carcinoma (colloid carcinoma).

In a second time we had to rule out an extracutaneous primary origin for which mammographic and ultrasonographic studies were performed. Once a primary breast location were discarded a pancolonoscopy without findings was also carried out; additional immunohistochemistry (neoplasm negativity



Figure 1: Mucinous Carcinoma of the skin. Macroscopic image in which the gelatinous features of the lesion can be observed.

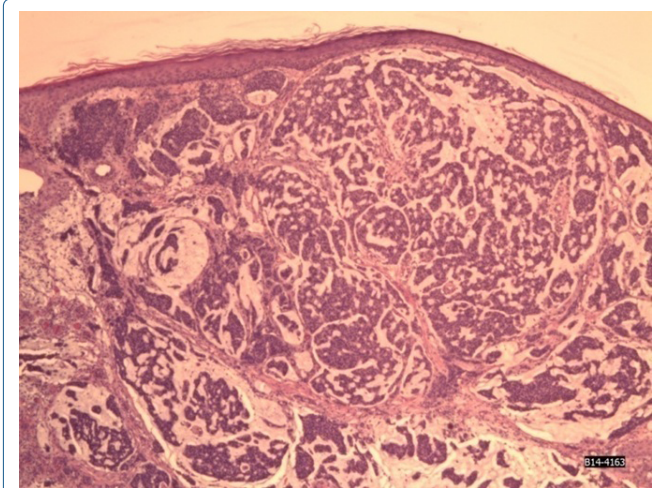


Figure 2: Mucinous Carcinoma of the skin histology. Large mucinous lakes inside which multiple epithelial nests can be observed, HE 100x.

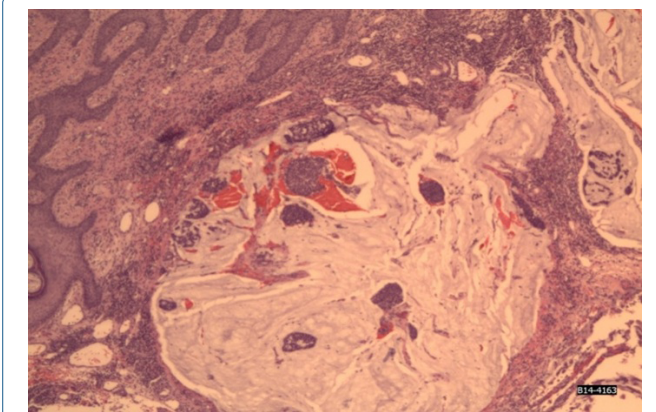


Figure 3: Mucinous Carcinoma of the skin histology. Apposition of mucinous lakes and epithelial groups of cells, HE 200x.

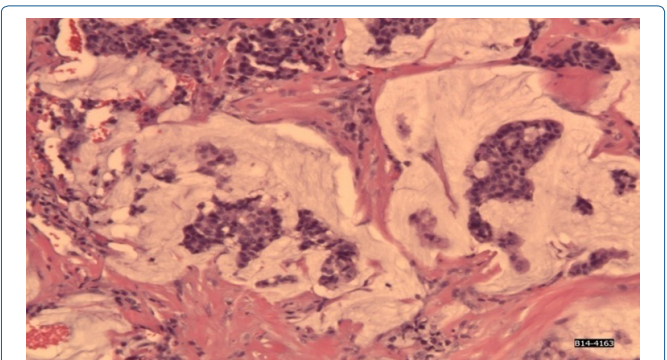


Figure 4: Mucinous Carcinoma of the skin histology. We can appreciate the relationship between epithelial nests and mucinous lakes in more detail, HE 200x.

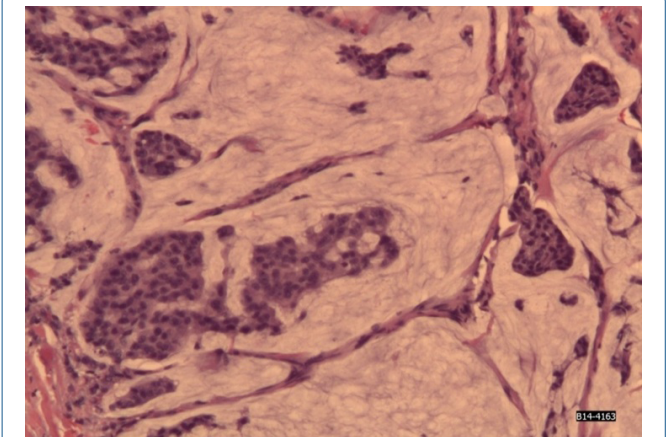


Figure 5: Mucinous Carcinoma of the skin histology. Some groups of epithelial cells show a cribriform pattern HE 400x.

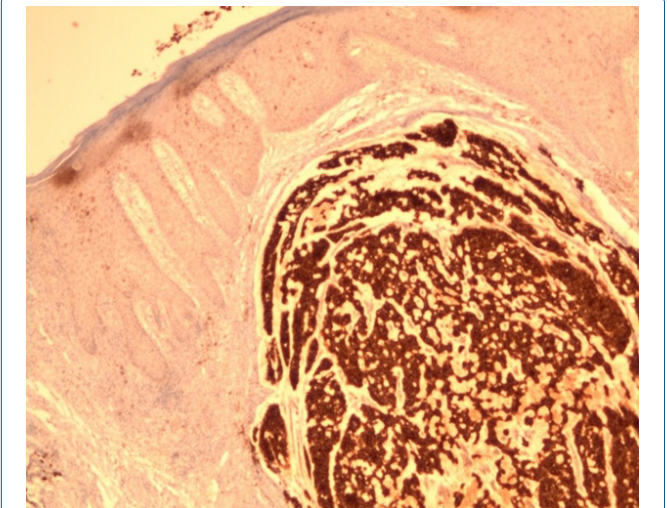


Figure 6: Mucinous Carcinoma of the skin histology. Epithelial cells are positive with CK 19 (epithelial membrane antigen), CK19 100x.

digital rectal examination and systemic image studies with CT were carried out with negative results.

Results

It seems logical to consider the tumour as a primary Mucinous Carcinoma of the skin.

for cytokeratin 20) discarded this origin. Endoscopy of the upper digestive tract, the study of salivary glands, PSA levels,

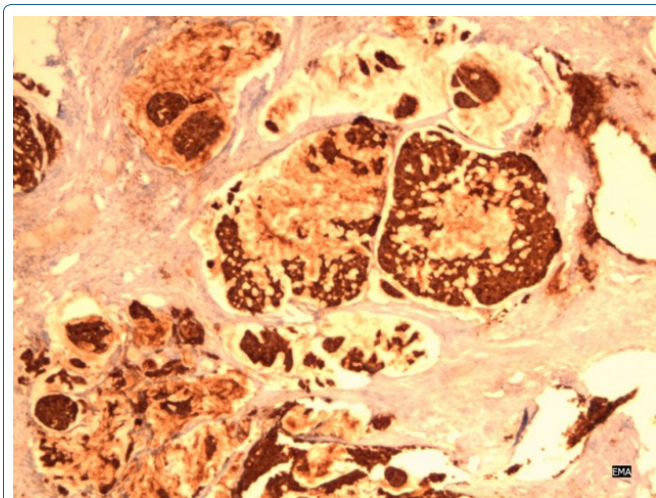


Figure 7: Mucinous Carcinoma of the skin histology. Epithelial cells are positive with EMA (epithelial membrane antigen), EMA 200x.

Discussion

The first description of primary cutaneous Mucinous Carcinoma is attributed to Lennox et al., in 1952 [1]. This is an extremely rare cutaneous neoplasm, more frequent in advance ages with preferential localization in head and trunk that has a course usually indolent although it has capacity for recurrence and metastases [2-6]. As in our case, debuts as a nodular lesion of progressive growth depending on the extent of the mucinous component, so will be the consistency and macroscopic appearance of the lesion. The neoplasm does not show encapsulation but infiltrative pattern composed of lakes of mucin within which epithelial cell nests exhibiting different architectural patterns are distinguished. The density will vary from case to case and will result in the classification of neoplasm in pure (the mucinous component occupies more than 90% of the tumor) or mixed, as in our case (greater ductal epithelial component) [5]. Cellular pleomorphism is generally limited as is also uncommon mitotic activity. Cases have been reported where there is a component *in situ* (not present in ours) that can be shown with the help of immunohistochemistry for p63

or calponin, that will stain the surrounding myoepithelial cells [7,8]. The presence of a component *in situ* at skin level will help us when assigning a skin origin.

To make the diagnosis of primary cutaneous colloid carcinoma is mandatory rule out primary outbreaks in other locations, circumstances in which the immunohistochemistry may be helpful. Hormone receptor immunostaining does not help discriminate the primary skin or breast malignancies as both can and do show positivity for them. Surgical excision is the treatment of choice but recurrences (about 20%) do occur generally related to different histological patterns. The prognosis is related to the complete or incomplete resection (most common scenario) of the tumor. Our patient had no recurrences after two years of follow-up.

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