CASE REPORT

Cutaneous metastases carcinoma. Case report and pathological considerations

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Abstract

Diagnostic of cutaneous metastases is relatively rare; this is important because sometimes may be the first manifestation of an undiscovered internal malignancy. Usually dissemination may take place through the lymphatics or the blood stream. The case of a patient, female, which has on the inferior 1/3 part of the abdominal wall skin a multinodular tumor mass, which evolves from about three months ago and accompanying by lymphoedema of the legs, is presented.

***Keywords*:** cutaneous metastases, bladder cancer.

Introduction

The skin is a relatively uncommon site for presentation of metastases. It is estimated that cutaneous metastases develop in less than 10% of all cases of metastatic malignant disease [1]; approximately 3/4 of metastatic lesions in men were identified in the anterior head and neck region, while 3/4 of the lesions in women were found on the anterior chest and abdomen [2]. They may be present at any age but the greatest incidence is in the fifth to seventh decades [3]. Frequently the location of a cutaneous metastasis reflects the site of the underlying tumor.

Histologically, the metastatic lesion may mimic the primary tumor or they may be so pleomorphic that immunohistochemical studies may be needed to suggest the origin of the primary, especially when the primary is unknown [4, 5].

Patient and methods

We present a case of a female patient, 72-year-old, with multinodular cutaneous mass, several millimeters to centimeters in diameter that growing and appears to evolve from a dermal fibrous plaque stage, to the skin of the abdominal wall. The overlying skin frequently shows a reddish-blue discoloration. There are tumoral focal areas of necrosis. Lymphedema on the legs is also present.

She was biopsied and tissue samples were processed by means of the classical histopathological method of paraffin embedding and were stained with Hematoxylin–Eosin.

Immunohistochemistry (IHC) was performed on sections (3 μm thick) from 10% formalin fixed, paraffin-embedded tissue, according to Avidin–Biotin Complex method, modified by Bussolatti and Gugliotta. We used the following antibodies, their clones, final dilution and producers (Table 1).

Table 1 – ***Immunohistochemical markers used in positive and differential diagnosis***

Antibody	Producer	Dilution	Clone
CK 7	DAKO, Glostrup, Denmark	1:50	OV-TL 12 / 30
p-53	DAKO, Glostrup, Denmark	1:50	DO-7
CK 20	Novocastra	1:50	PW 31
EMA	DAKO, Glostrup, Denmark	1:75	E 29
CK34βE12	DAKO, Glostrup, Denmark	1:50	34βE12
βHC	Novocastra	1:500	polyclonal
S-100	DAKO, Glostrup, Denmark	1:500	polyclonal
Vimentin	DAKO, Glostrup, Denmark	1:50	V 9
CD 10	Neomarkers	1:50	56C6

Results

Histological examination of the skin reveals extensive invasion of the dermis. Usually, it can be distinguished from primary squamous cell carcinoma by

the absence of proliferation from the surface epidermis (Figure 1).

The tumor cells are atypical in character with large, pleomorphic, hyperchromatic nuclei with trabecular pattern (Figure 2). Some cells were multinucleated showing enlarged, intricate nuclei with atypical mitoses, granular chromatin and numerous nucleoli. Multiple sections may have to be scrutinized carefully before foci of squamous differentiation (keratinisation) (Figure 3).

Malignant cells were immunoreactive with CK7 (diffuse expression) (Figure 4), CK34βE12 was positive in frequent tumoral cells (Figure 5), and CK20 was positive in rare cells (Figure 6). Antibodies against epithelial membrane antigen was focal expression. Diffuse S-100 expression was also noted (Figure 7). Tumoral cells are negative immunostain expression for p-53, βHCG, vimentin and CD10.

Discussions

Some tumors are characterized by a predilection to metastasize to certain sites: lymph nodes, liver, lungs, adrenals, brain, bone, ovaries and kidneys [6].

The skin is a relatively uncommon site for presentation of metastases. From the various patterns of cutaneous metastasis, the most common is the development of a nodule or group of nodules, flesh colored, less than 3 cm in greatest diameter; other patterns include micropapules, plaques and lesions simulating scars [2, 6].

In our patient, histological appearance showed trabecular pattern, small clusters and single neoplastic cells irregularly dispersed. The neoplastic cells are usually large, polygonal, pleomorphic with abundant eosinophilic or amphophilic cytoplasm and have a conspicuous component of malignant giant cells; nuclei tend to be enlarged, sometimes bizarre and hyperchromatic, but are only pleomorphic and many of these have granular chromatin. The mitotic rate is variable and related to the grade of the tumor. Individual cell keratinization is present.

Immunohistochemistry is occasionally helpful since the cells may stain immunohistochemically for a few cytokeratin subtypes [4, 7].

Anyway, some tumors have been reported only very exceptionally with skin metastases; these include also transitional bladder carcinoma. Prognosis generally is very poor once is made the discovery of a cutaneous metastasis.

Conclusions

Macroscopic and microscopic examination suggested a diagnosis of cutaneous metastatic carcinoma. Most cutaneous metastatic squamous cell carcinomas arise in the lung, oral cavity or esophagus. However, our patient, at the abdominal echography, presented a thick wall of the urinary blade. In conclusion, we can affirm that the cutaneous metastasis carcinoma is probably related with a malignant urinary blade tumor.

For more investigation and a specific treatment, the patient was sent to the oncology clinic.

For pathologist is of the greatest importance to recognize that the tumor is in fact a secondary deposit and not an unusual primary neoplasm. Determining the origin of the tumor is sometimes very difficult, although use of ancient techniques, particularly IHC should give them some useful pointers in the right direction.

IHC can play an important role in the assessment of metastasis associated with an occult primary tumor.

References

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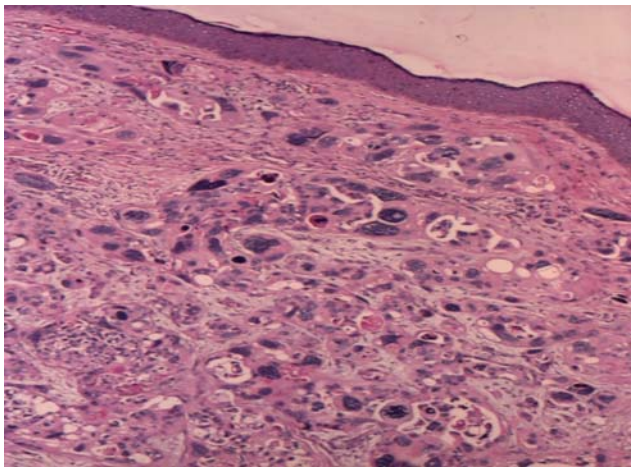

Figure 1 – ***Metastatic carcinoma of the skin (HE stain, ×10)***

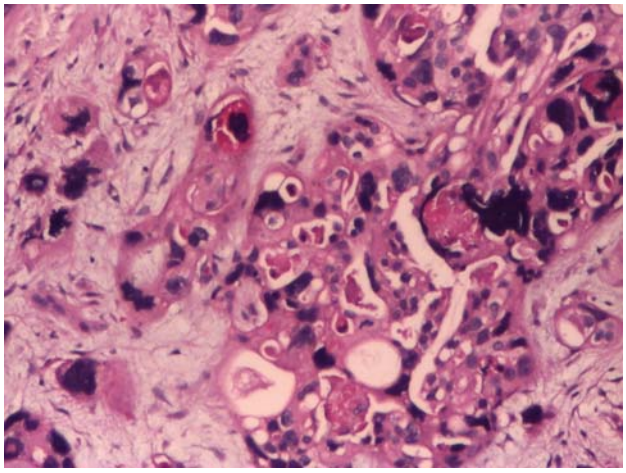

Figure 2 – ***Metastatic carcinoma of the skin. Atypical tumoral cells (HE stain, ×20)***

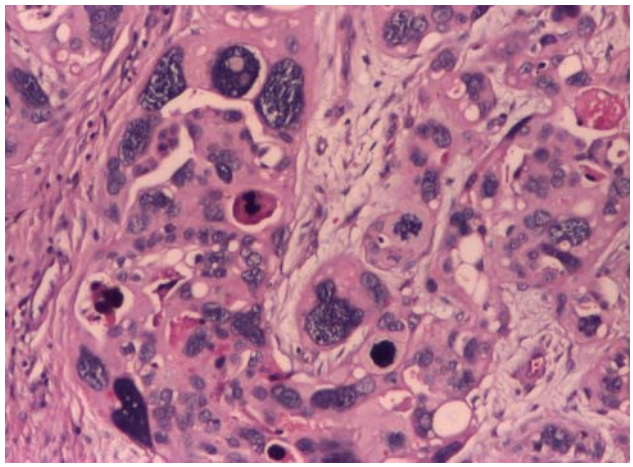

Figure 3 – ***Metastatic carcinoma of the skin. Numerous polymorphous nuclei. Foci of keratinisation. Atypical mitoses (HE stain, ×40)***

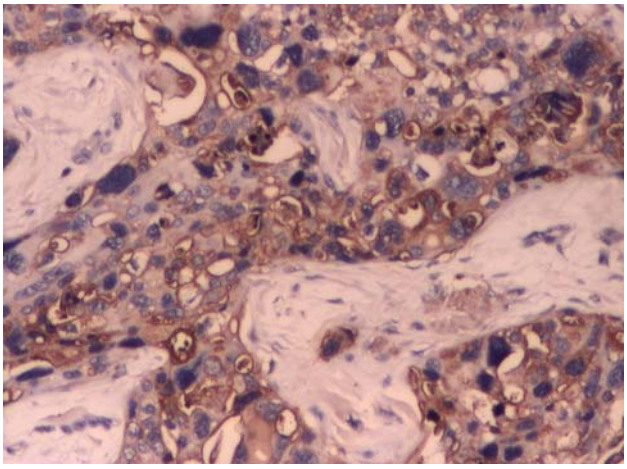

Figure 4 – ***Metastatic carcinoma of the skin. CK7 diffuse positive, ×10***

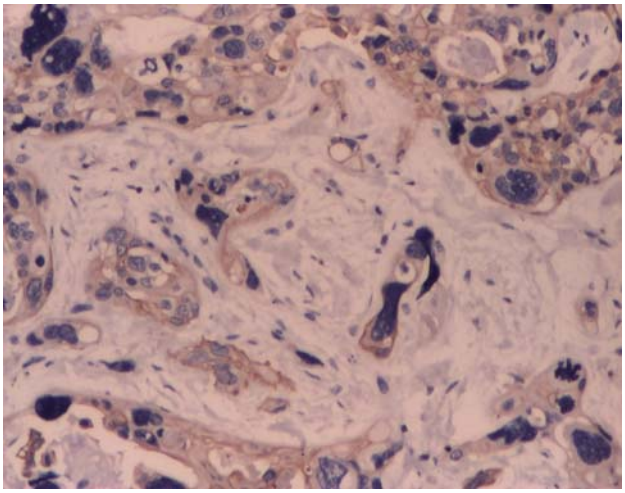

Figure 5 – ***Metastatic carcinoma of the skin. CK34βE12 diffuse positive, ×10***

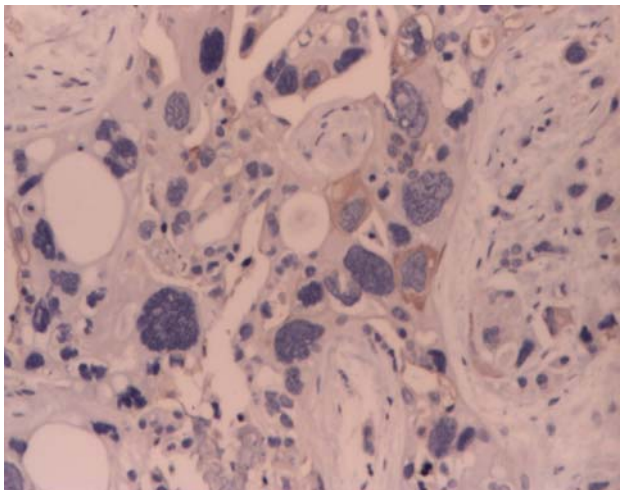

Figure 6 – ***Metastatic carcinoma of the skin. CK 20 focal positive, ×20***

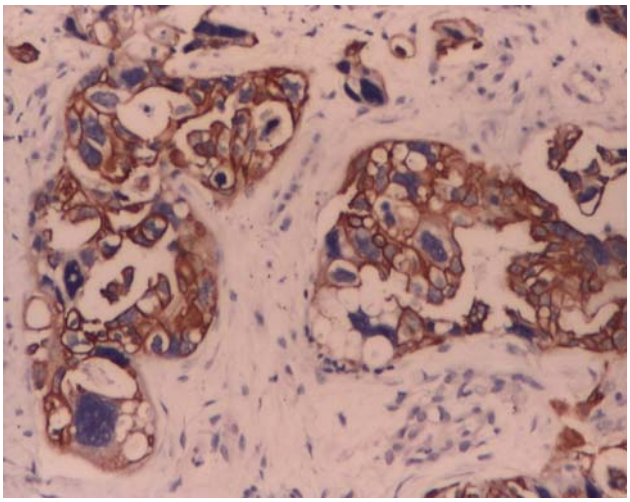

Figure 7 – ***Metastatic carcinoma of the skin. S-100 diffuse positive, ×20***