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Cutaneous metastasis of a hypopharyngeal squamous cell carcinoma—unusual presentation

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Abstract

Cutaneous metastasis are uncommon and account for only 2% of all skin cancers, but are extremely rare in hypopharyngeal carcinomas. Although often associated with advanced cancer, cutaneous metastasis can be the first indication of relapse or treatment failure. Additionally, the clinical presentation is widely variable, which can make an early diagnosis difficult. New skin lesions should be evaluated in cancer patients to rule out metastases. Herein, we present a patient with an unusual cutaneous metastasis as the first sign of recurrence of a hypopharyngeal carcinoma.

Keywords: skin neoplasm, metastasis, hypopharyngeal cancer, squamous cell carcinoma of head and neck

Introduction

Cutaneous metastases are uncommon, accounting for only 2% of all skin cancers and less than 10% of all distant metastatic lesions [1-5]. There is a correlation between the frequency of cutaneous metastasis and the type and prevalence of primary cancer, according to age and sex, with breast and lung cancers being the most common, in women and men, respectively [3,6].

Head and neck squamous cell carcinoma (HNSCC) are aggressive cancers with metastasis occurring in up to 15-20% of cases. However, they rarely metastasize to skin and the reported incidence is only 0.8-1.3%. Hypopharyngeal carcinomas represent a small sub-group of HNSCC and cutaneous metastasis are extremely rare [2,5,7]. Most

common metastatic sites for this tumor include lung, liver, and bone [7,8].

Cutaneous metastasis can be classified as loco-regional, in-transit, or distant. Local metastasis can develop through direct invasion (contiguity), iatrogenic implantation, or lymphatic spread. Conversely, distant metastasis results from hematogenous spread [4,9]. Cutaneous metastases usually appear in advanced stages of the disease and are associated with very poor prognosis, and median survival of 7.5 months [6]. We report a patient with hypopharyngeal carcinoma and an unusual cutaneous metastasis as the first indication of disease relapse.

Case Synopsis

A 73-year-old man was referred owing to a 2-month history of a persistent, non-painful, non-pruritic, hemithoracic eruption, which started as erythematous patches and became progressively infiltrated forming plaques. He had been taking oral prednisone for two weeks (20mg daily) without improvement. Eight months before he was diagnosed with a squamous cell carcinoma (SCC) of the pyriform sinus, stage cT4N2aM0, and had completed 6 cycles of chemotherapy three months before, with apparent total remission on PET scan. On physical examination, he showed extensive erythematoviolaceous plaques, with a retiform pattern, in the left cervical, hemithoracic, and upper abdominal areas, slightly exceeding the midline. (**Figure 1**). He also complained of dyspnea on mild exertion and had reduced respiratory sounds on both sides. Complete workup, including a chest CT scan and an incisional skin biopsy were taken.

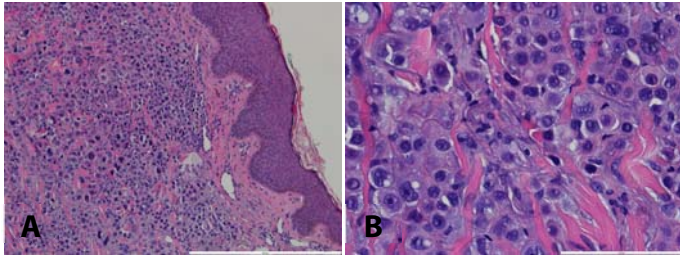


Figure 2. **A)** Histologic examination: dermal full-thickness infiltration by large cells with broad, not involving the epidermis. H&E, 10×. **B)** Higher magnification view of nuclear atypia. H&E, 40×

The histologic examination revealed dermal full-thickness infiltration by large cells with broad, eosinophilic cytoplasm, not involving the epidermis. (**Figure 2**). On immunohistochemical study, neoplastic cells expressed CK7, EMA, p63, p40, and CK19 (not shown). Other markers, namely CK20, HMB-45, S100, TTF1, CD34, GATA-3, chromogranin, and synaptophysin were negative. Based on these findings, a diagnosis of cutaneous metastasis from a squamous cell carcinoma was made. Simultaneously, the patient presented with bilateral pleural effusion with respiratory failure and disseminated blastic bone metastasis. Given the advanced stage of the disease and general health deterioration, he was placed on palliative care and died a week later.

Case Discussion

Cutaneous metastases are often a sign of widespread cancer. However, in 6.4-7.8% of cases they precede other distant metastasis. They may also represent failure of ongoing treatment, tumor relapse or, more rarely, be the first sign of an unsuspected internal malignancy [6,9].

Several studies have shown that up to 9% of cutaneous metastases are associated with head and neck malignancies, the majority from SCC. Therefore, these malignancies should always be considered when the primary cancer is unknown [1]. On average, cutaneous metastasis develops 36 months after the initial diagnosis, though they can present decades later [8,9].

The classic presentations are nodules, usually firm, erythematous, and non-painful. However, the clinical

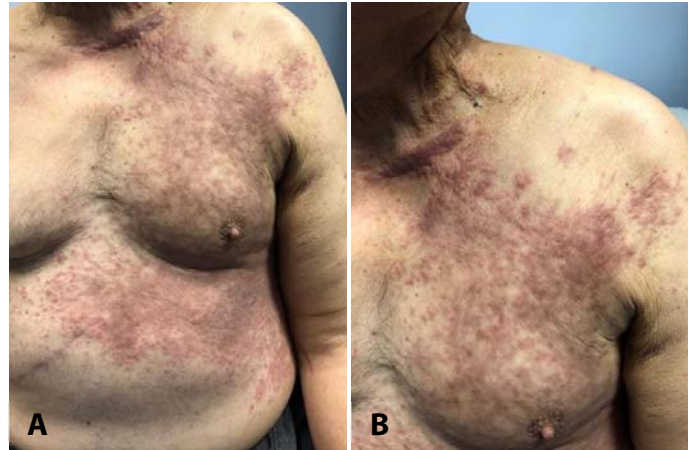


Figure 1. **A)** Erythematous-violaceous patches and plaques, with a retiform pattern, on the left cervical, hemithoracic, and upper abdominal areas. **B)** More detailed view of the retiform pattern.

appearance is widely variable and may resemble almost every dermatological condition. Some of the most mentioned patterns include erysipelas-like, morphea-like, pyogenic granuloma-like, hemangioma-like, herpetiform, zosteriform, and bullous [6,9,10]. Nevertheless, there is usually no association between type of tumor and clinical presentation and it has been reported that about 45% of the lesions are initially not suspected to be metastases [10]. Therefore, the diagnosis depends on histopathologic study, which usually requires immunohistochemistry [9,10].

In our patient, the most unusual aspect was the large extension of the lesions. At the same time, the rash did not fit in any particular pattern and although the plaques pointed to an infiltrative nature, the color and retiform configuration resemble a vascular disease.

On the other hand, the majority of cutaneous metastasis occurs close to the primary tumor. In head and neck cancers, these generally occur above the diaphragm, most commonly on the scalp and chest wall, and usually via dermal lymphatic spread. Distal lesions typically develop by hematogenous dissemination [3,11].

Some authors have suggested that an early diagnosis can influence the prognosis and that a dermatological examination should be part of the follow-up assessment of cancer patients. Also,

patients should be educated to report all skin lesions, as they are often ignored [9].

Conclusion

Cutaneous metastasis may be the first clue of recurrence or disease progression of cancers, with important implications on prognosis and

therapeutic goals. Since the clinical presentation of cutaneous metastasis is extremely variable, a high level of suspicion by clinicians is necessary to avoid delaying the diagnosis.

Potential conflicts of interest

The authors declare no conflicts of interest.

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