Collision of malignant neoplasms of the skin: basosquamous cell carcinoma associated with melanoma*

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Abstract: Collision tumors are characterized by the coexistence of two cancers in the same anatomical site and its pathogenesis remains controversial. Although uncommon, the association of basal cell carcinoma and melanocytic nevus is the most common among combinations of skin tumors. Even rarer is the association of two malignant tumors. We report a case of tumor collision representing melanoma and basosquamous cell carcinoma, a combination not previously described in the literature, since there are no reported cases of melanoma with this type of basal cell carcinoma.

Keywords: Carcinoma, basal cell; Carcinoma, basosquamous; Melanoma; Skin neoplasms

INTRODUCTION

Two tumors can coexist simultaneously in one anatomical site, constituting the called collision tumors. Although unusual, this association is well reported by several authors.[1]

In a retrospective review of 40,000 biopsies, 69 examples of collision tumors were found. Most combinations involved basal cell carcinoma (BCC) and melanocytic nevus; melanocytic nevus and seborrheic keratosis; BCC and seborrheic keratosis; actinic keratosis and melanocytic nevus; BCC and neurofibroma.[1]

Association of two malignant tumors is a much more unusual event. The first reported case of melanoma associated with BCC was described by Kao in 1983 and presented at the annual meeting of the American Society of Dermatopathology (ASDP).[2]

The largest review on this association consists of the evaluation of 78,000 biopsies of skin cancers, which showed 11 cases of melanoma colliding with BCC. Of these 11 cases, 7 were located in the trunk and 4 in the arm; 6 patients were men and 5 women. Mean age was 53 years. In all cases, the boundaries of two tumors were well defined. Apparently, the combination showed no impact on the natural course of each neoplasm. In this study, it wasn't found a melanoma association with squamous cell carcinoma (SCC).[3]

According to the literature review performed, there are reports of 27 cases of collision tumors involving melanoma and BCC.

In most of these reports, there is no mixing of cells of each tumor and the boundaries of each are well-defined.[4] The interaction between these tumors is seen less frequently and, in such cases, immunohistochemistry may be useful in the differentiation of cell types.[4,5,6] The meeting of invasive melanomas associated with BCC is also unusual: usually a melanoma in situ is highlighted.[7]

CASE REPORT

Male patient, 60 years old, phototype II, married, mason. He came to medical care presenting blackened lesion in the frontal region. The patient reported emergence of a "wound" that did not heal for about 25 years on the same site. According to the report, he sought specialized care and underwent curettage without conduction of histopathology. There

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was local recurrence one year after the procedure. The lesion was asymptomatic and presented a progressive growth.

Patient had hypertension and personal history of prostate cancer treated with radiotherapy for 6 months and he was still being followed by the urologist. Furthermore, he underwent excision of BCC in the trunk. He wasn't aware of family history of skin cancer.

Dermatological examination showed a brownish macula of 4 cm in diameter, asymmetrical, with irregular edges and presenting colors variation (Figure 1). Dermatoscopy found multi-component pattern highlighted by the presence of multiple blue-gray spots, hypochromic area, shiny white streaks and amorphous areas, in addition to atypical vascular pattern (Figures 2 and 3).

Based on clinical and dermoscopic findings, diagnosis was melanoma. The patient underwent surgical excision of the lesion with total skin graft removal of the right infraclavicular region for reconstruction. After grafting with good coaptation of the banks, a Brown bandage was performed and the material was sent for histopathological examination. This exam showed superficial spreading melanoma, with a thickness of 0.24 mm and Clark level II; and also absence of mitosis or ulceration in area with marked photodamage. It was also observed the presence of BCC, infiltrative type, with areas of coexisting squamous differentiation (basosquamous), interspersed with desmoplastic tissue (Figures 4, 5 and 6). Surgical margins were free of neoplastic involvement.

The patient is being followed-up at 6 months after surgery, not presenting any complications.

DISCUSSION

Pathogenesis of collision tumors is still a matter of speculation. It is known that severe intermittent exposure to sunlight is a common risk factor for the

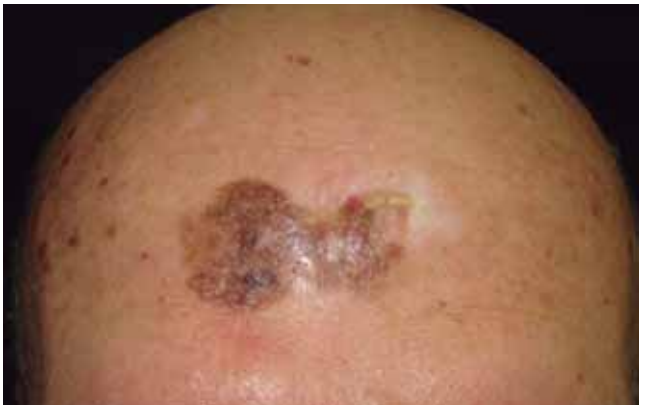

Figure 1: Brownish macula of 4 cm in diameter, asymmetrical, with irregular borders and presenting color variation

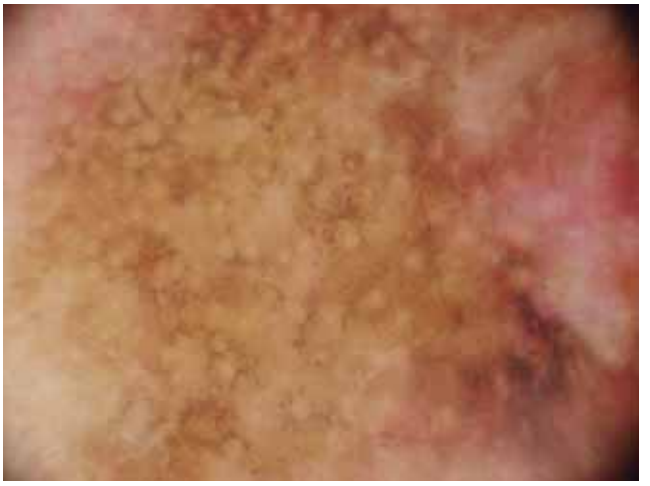

Figure 2: Dermoscopic examination showing multi-component pattern, with the presence of multiple blue-gray spots, hypochromic area, shiny white streaks and amorphous areas

Figure 3: Atypical vascular pattern observed on the dermoscopic examination, a global standard for multi-components

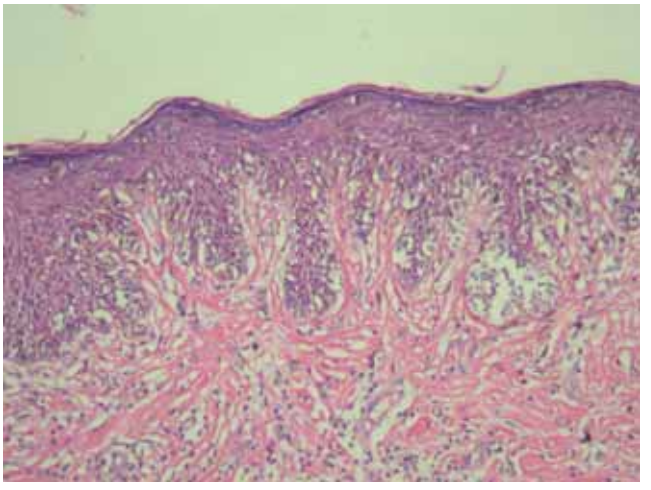

Figure 4: Histopathological examination showing the presence of superficial extensive melanoma, with 0.24 mm thickness, Clark level II

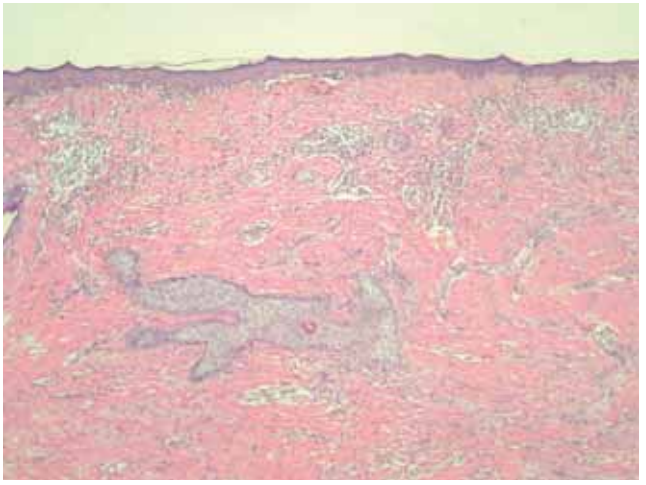

Figure 5: Combined with the superficial extensive melanoma, it was also observed the presence of infiltrative type BCC, with areas of coexisting squamous differentiation (basosquamous) and abundant desmoplastic stroma

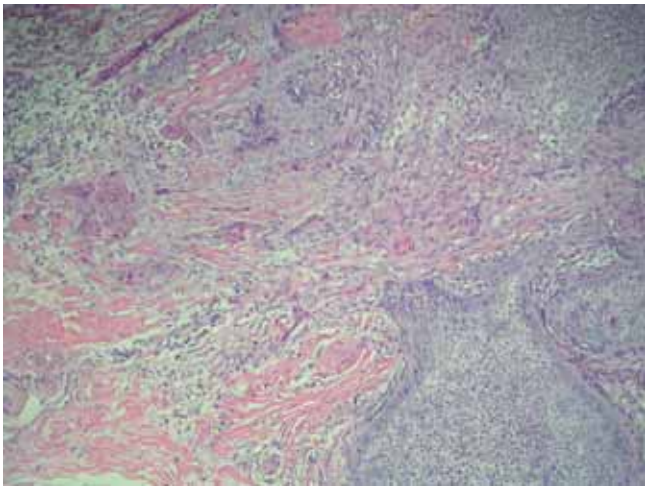

Figure 6: Histopathological examination demonstrating the presence of squamous differentiation areas in BCC (basosquamous)

development of melanoma and BCC. Some authors believe that the presence of a tumor may induce epithelial or stromal alterations, responsible for the development of a second tumor.[1]

Despite the lack of histological evidence of curetted injury, according to the analysis, it is believed that the patient initially presented BCC that was erroneously curetted. This would justify the hypochromic area observed in dermoscopy and the fibrotic dermis evidenced in histopathological examination. The patient had other risk factors for the development of skin cancer, such as low phototype and exaggerated sun exposure due to work. Melanoma may secondarily evolved in the area of photodamage.

Although dermoscopy proved to be useful for early diagnosis of melanoma and for differential diagnosis of pigmented lesions, the current study did not observe evidences to suggest a collision of skin tumors, because melanoma overlaps BCC, which wasn't pigmented.

Basosquamous or metatypical carcinoma displays histological characteristics of BCC and SCC, with controversial histogenesis and biological behavior. It has a low incidence, accounting for less than 2% of all malignant skin neoplasms. Also, it presents greater local aggressiveness, even in the resection with safety margins, and potential to metastasize. The hypothesis for the basosquamous carcinoma is the presence of totipotent cells in BCC, responsible for squamous cell differentiation. This squamous differentiation is responsible for the clinical behavior of more local aggressiveness.[8]

In the case reported the fact that it is a basosquamous carcinoma makes it even more peculiar. According to the literature review performed, there is no report of melanoma association with this type of BCC.

Prognosis and treatment of these cases are dictated by the more serious tumor. When diagnosed early and excised with the recommended margins, it tends to develop favorably, as did the patient reported in this study.

Outpatient monitoring of these patients for 5 to 10 years is essential to evaluate local recurrence and early diagnosis of a second primary melanoma. Patients with a prior history of melanoma have a 10% probability of developing another melanoma in 5 years. After the second episode of melanoma, this chance increases to 30% in 5 years.[9]

We chose to describe this case due to its peculiarity, the importance of ratifying the need of histopathology before and/or after performing any invasive procedure and for being the first reported case of melanoma associated with basosquamous carcinoma.❑

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