Case Report

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Collision of Primary Malignant Neoplasms on the Skin: The Connection between Malignant Melanoma and Basal Cell Carcinoma

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Key Words

Collision tumor
Basal cell carcinoma
Squamous cell carcinoma
Malignant melanoma

Abstract

Several studies have reported the association of cutaneous malignant melanomas (MM) with carcinomas. Collision malignancies cases from our files were retrieved. Among a series of 78,000 primary cutaneous cancers, 11 were collision tumors of MM with basal cell carcinoma and 106 were basosquamous carcinomas while no association was found between MM and squamous cell carcinomas. It is concluded that coexisting and confluent malignancies of the skin might not always be a random event.

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The association of multiple primary malignancies in the same patient is well recognized. Malignant melanomas (MM) may develop at a distance from other primary malignancies [1-8]. Among these patients, the association of MM and basal cell carcinomas (BCC) seems to predominate [8]. While collision of benign cutaneous tumors is not uncommon, the coexistence of more than one malignant neoplasm of different cell lineages in the same biopsy specimen is rare [9]. Reported cases of MM in contiguity with BCC are few in number [10-12].

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A total of 11 specimens in which MM and BCC were contiguous was identified from a series of 78,000 excisions of primary cutaneous cancers. From the same files, 106 basosquamous carcinomas were retrieved while no association between MM and squamous cell carcinomas (SCC) was found. In most instances, the clinician was unaware of the presence ofthe collision between two distinct neoplasms.

Among the MM-BCC collision tumors, 7 were present on the trunk and 4 on the arm (fig. 1). The M/F ratio was 6/5, with a mean age at diagnosis of 53 years (range 38-61). Patients had no known malignancy on any other region of the body.

The clinicopathologic confrontation did not reveal specific invasive patterns of both neoplasms. In all cases, the boundary between MM and BCC was shaφly delimited so that the two types of

neoplastic cells were not intermingled (fig. 2). The MM-BCC association had apparently no impact on the normal predicted course of either neoplasm.

Discussion

The connection between MM and other cancers has repeatedly been shown [1-8]. A recent study reported that about 10% of MM patients had associated primary carcinomas of any origin [8]. In that evaluation of non-collision tumors, a correlation between BCC and SCC and MM was lacking. However, a fourfold increase in risk of MM was shown in another study when BCC or SCC was present on the face [6], whereas in our patients, MM-BCC collision tumors were not found on the face but were rather located at body sites where the prevalence of BCC and SCC has been shown to be low and almost similar [13]. Hence, the difference in the prevalence of MM-BCC over MM-SCC might not be coincidental. These aspects represent the relevant clinical manifestation of the so-called field cancerization.

All cases were characterized histologi-cally by a sharp delimitation of the contiguous neoplasms. This is at variance with another distinct biological feature encountered when activated, nonneoplastic melanocytes infiltrate a carcinoma [14].

In conclusion, the present retrospective study suggests that the prevalence and the spectrum of coexisting and confluent malignant neoplasms of the skin are not always a random event. Our observations are in line with another study showing that a predisposition for cancer together with unidentified environmental factors may play a role in the current changes in prevalence of cutaneous malignancies [8].

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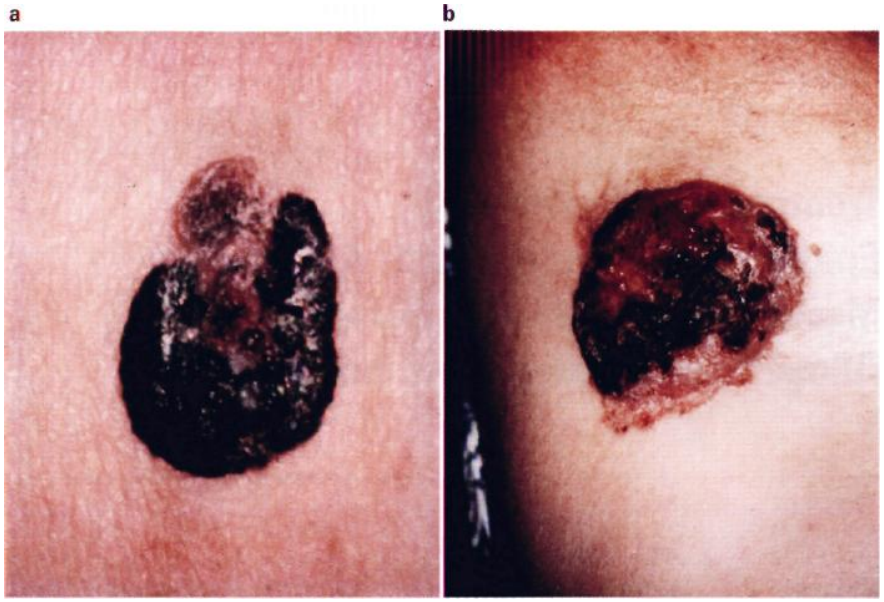

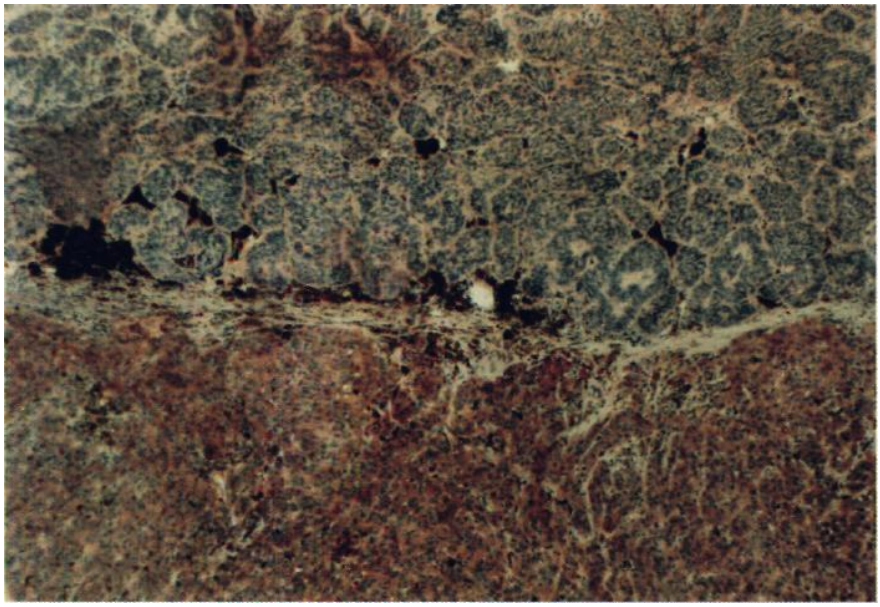

Fig. 1. a, b Collision neoplasms. BCC in close contact with nodular MM.

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Fig. 2. Sharply delimited borderline between a BCC and an MM. S-100 immunostaining.