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Dermoscopic clues to diagnose acantholytic dyskeratosis

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Case presentations

Case 1

A 61-year-old man presented with multiple small, reddish, eroded papules located on his chest (Figure 1A). Histopathologic examination revealed the typical findings of Grover's disease.

Case 2

A 47-year-old woman was treated with vemurafenib for stage

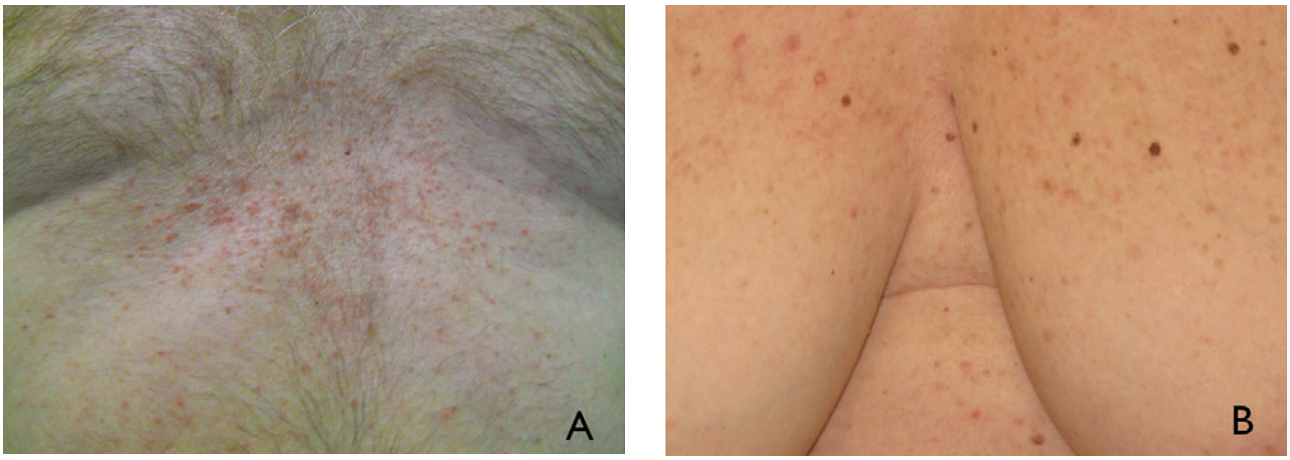

Figure 1. (A) Clinical examination of case 1 showed multiple confluent erythematous papules in a patient with Grover's disease. (B) Clinically, multiple reddish papules were observed on the chest of a patient with stage IV melanoma treated with vemurafenib. (Copyright: ©2015 Specchio et al.)

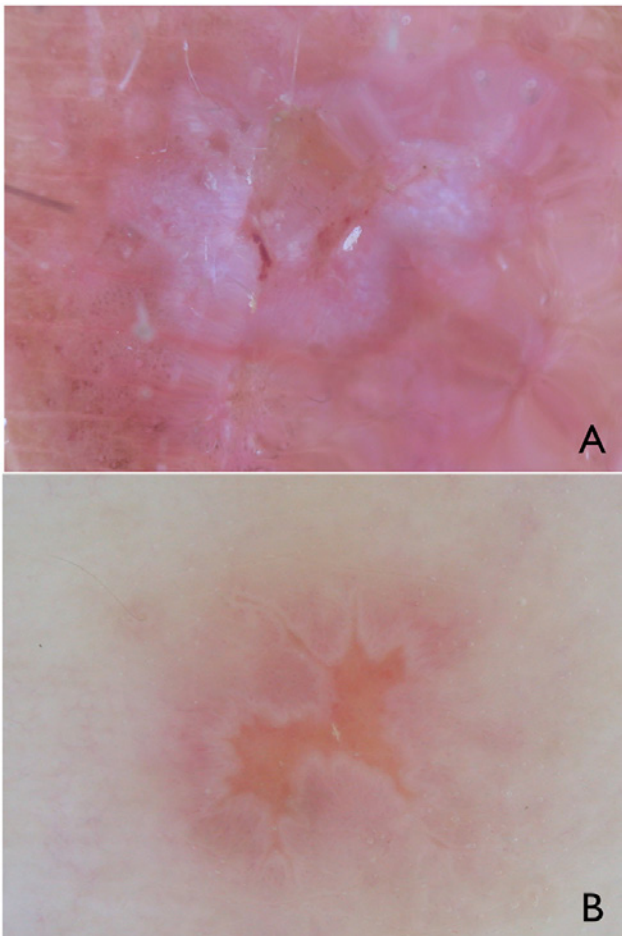

Figure 2. (A) Dermoscopic evaluation of case 1 displayed a central yellowish to brown star-like pattern overlying a pinkish homogeneous structureless area similarly to the ones observed in case 2 (B). (Copyright: ©2015 Specchio et al.)

IV melanoma, having been referred because of the recent onset of multiple asymptomatic reddish papules located on her chest (Figure 1B). These lesions represented a skin rash of acantholytic dyskeratoma occurring while under vemurafenib treatment that spontaneously disappeared over the next few weeks.

The dermoscopic evaluation of the lesions in both cases showed a central yellowish to brown star-like pattern overlying a pinkish homogeneous structureless area (Figure 2A and B).

Conclusions

Treatment with vemurafenib, a small-molecule BRAF inhibitor, has led to significant improvement of prognosis in patients with advanced melanoma. Similar to other kinase inhibitors, the use of vemurafenib has been accompanied by several dermatologic adverse events [1]. These include both benign and malignant lesions, such as cutaneous squamous-cell carcinoma, verrucal keratosis, plantar hyperkeratosis, hair follicle changes, panniculitis, and photosensitivity [2], along with widespread eruptions with histologic features of acantholytic dyskeratosis [3]. Acantholytic dyskeratoma has been previously reported in association with other chemotherapeutics, including the epidermal growth factor receptor inhibitor cetuximab; however, the pathogenesis of acantholytic dyskeratosis is still unclear. Two hypotheses have been postulated. One theory is that the accumulation in the skin of chemotherapy metabolites by sweating may be related to the development of dyskeratosis and acantholysis; another theory supposes that acantholytic dyskeratosis may represent an off-target effect of small-molecule kinase inhibitors [1].

Recognition of cutaneous side effects occurring during BRAF-inhibitor therapy is essential for patient management. Acantholytic dyskeratomas can be easily diagnosed by using dermoscopy. In fact, in acantholytic lesions, dermoscopy allows the visualization of a stereotypical pattern [4], which also assists in the differentiation of these benign lesions from malignancy, such as keratoacanthoma or invasive squamous cell carcinoma that may also occur as a complication of BRAF inhibitor therapy. Typically, these papules display a central star-like pattern of brown scales that are otherwise not detectable at clinical examination. This dermoscopic pattern has been described to be peculiar for Grover's disease and solitary acantholytic dyskeratoma [4]. Interestingly, our study shows the characteristic dermoscopic star-like pattern can be observed in acantholytic dyskeratotic lesions occurring during treatment with BRAF-inhibitors, as previously reported [3].

In conclusion, our case underlines the importance of dermoscopy to improve the recognition of acantholytic dyskeratomas (in Grover's disease and in patients under vemurafenib therapy), a skin eruption that is usually difficult to diagnose by naked eye.

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