Treatment of keratoacanthoma centrifugum marginatum with topical tretinoin

Sir,
Keratoacanthoma (KA) is a locally destructive tumor of the skin closely resembling squamous cell carcinoma. Keratoacanthoma centrifugum marginatum (KCM) is a rare variant of KA, usually solitary. Multiple KCM is rarer still,[1] and shows no tendency toward spontaneous regression.[2] We report a case of multiple KCM, which showed rapid regression of the lesions after topical treatment with tretinoin gel.

A 50-year-old, otherwise healthy, woman presented with multiple pruritic plaques of two years’ duration. She was a laborer, working outdoors in a rubber estate. She was a chronic smoker. There was no family history of any skin lesions, tumors or gastrointestinal disease.

The general physical and systemic examinations were normal. Skin examination revealed multiple (40 to 45 in number), dry, verrucous plaques, varying in size from 3 x 3 to 0.5 x 0.5 cm on the extensor aspects of both forearms, dorsum of the right hand [Figure 1], back of the waist, front and back of the upper trunk, and a few small papules on the left ear. The surface was depigmented and slightly scaly, the borders were raised, rolled, and hyperpigmented, and there was atrophy in the center of the lesions. The distribution of the lesions was strikingly limited to the sun-exposed areas.

Hemogram, biochemical parameters, liver and renal function tests, sputum, urine and stool examinations, chest x-ray, and abdominal ultrasonography findings were within normal limits.

Figure 1: Lesion of KCM on the hand.

Screening for syphilis and human immunodeficiency virus was negative. No clinical abnormality was detected on consultations with other relevant specialists.

A skin biopsy showed a central keratin-filled crater with the epidermis extending like a lip over the edge. There was a well-demarcated, epidermal proliferation at the base of the crater, which did not extend below the level of the sweat glands in the dermis, and had an eosinophilic glassy appearance due to keratinization. Multiple horn cysts were seen [Figure 2]. The findings were suggestive of KA.

As the patient did not give a history of appearance of fresh lesions, systemic therapy was not given. She was given an intralesional injection of 10% triamcinolone acetonide into the lesions on the right forearm only, to observe the response, and it was repeated after three weeks. As there was no expected improvement, topical therapy with 0.1% tretinoin gel applied at bedtime, was started. After two weeks, all the lesions had regressed remarkably and had almost completely subsided by eight weeks [Figures 3 and 4].

Figure 2: Photomicrograph showing well demarcated proliferations of KCM (H and E, ×40).
Both sun exposure and smoking have been strongly associated with the development of KA, as seen in the index case. KA is a strong risk factor for non-melanoma skin cancer and may be a component of the Muir-Torre syndrome, which is a cancer-associated genodermatosis. Hence, a cancer screening workup is necessary, along with patient education and follow-up.

For multiple lesions, systemic retinoids such as isotretinoin,[3] acitretin,[4] and etretinate,[5] as well as topical tazarotene,[6] have been used. Topical treatment, if effective, is preferable to systemic drugs to avoid the associated complications. Tretinoin modifies abnormal follicular keratinization in acne, which, similar to keratoacanthoma, is a disorder of the pilosebaceous unit. It exerts an antineoplastic effect, normalizes the differentiation of the dysplastic epithelium in actinic keratoses and has a normalizing effect on the histological appearance of dysplastic nevi. This has led us to suppose that tretinoin may be effective in our case. Rapid resolution of the lesions was achieved without any adverse effects.

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REFERENCES

1. Mangas C, Bielsa I, Ribera M, Fernandez- Figueras MT, Ferrandiz C. A case of multiple keratoacanthoma centrifugum marginatum. Dermatol Surg 2004;30:803-6.
2. Watanabe D, Tachi N, Tomita Y. Keratoacanthoma centrifugum marginatum arising from a scar after skin injury. J Dermatol 1996;26:541-3.
3. Feldman RJ, Maize JC. Multiple keratoacanthomas in a young woman: Report of a case emphasizing medical management and a review of the spectrum of multiple keratoacanthomas. Int J Dermatol 2007;46:77-9.
4. Ayolin F, Senturk N, Sabanciler E, Canturk MT, Turanli AY. A case of Ferguson – Smith type multiple keratoacanthomas associated with keratoacanthoma centrifugum marginatum: Response to oral acitretin. Clin Exp Dermatol 2007;32:683-6.
5. Ogasawara Y, Kinoshita E, Ishida T, Hamamoto Y, Fugiyama J, Muto M. A case of multiple keratoacanthoma centrifugum marginatum: response to oral etretinate. J Am Acad Dermatol 2003;48:282-5.