Answer to Dermacase *continued from page 985*

4. Keratoacanthoma

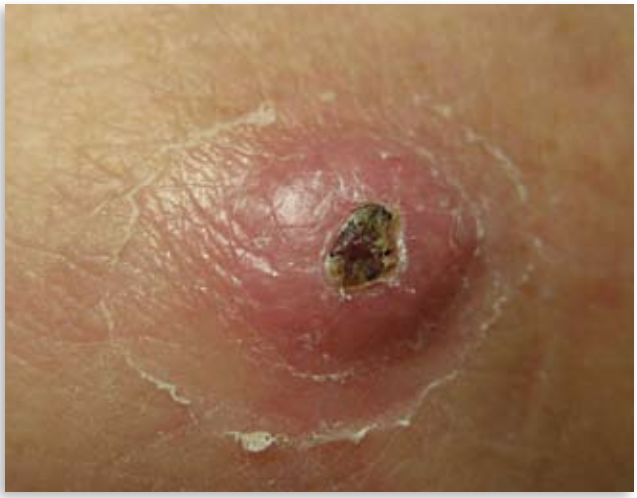
Keratoacanthoma (KA) is a neoplasm of epithelial cells, and typically affects fair-skinned, middle-aged to older individuals; it has a slightly higher predominance in males.[1-3] It usually appears as a solitary, nontender, flesh-coloured or pink nodule with a central-crusted, keratotic plug on hair-bearing, sun-exposed areas, primarily the face, neck, and hands.[1-3] The lesion is characterized by rapid growth and achieves an average diameter of 2.5 cm within 6 to 10 weeks.[1,3] In approximately 50% of cases, spontaneous resolution of the tumour occurs within 4 to 9 months of achieving maximal size, although an atrophic and pigmented scar usually remains.[1,3,4]

The etiology of KA is unknown, but it is thought to derive from hair follicles.[1-3] Additionally, several factors have been postulated to be involved in its development: Poor immunocompetence, UV radiation, mineral oil, cigarettes, and chemical carcinogens, such as tar and pitch, all might play an etiologic role.[1,2] Not uncommonly, KA forms in areas of trauma, such as surgical sites or areas subject to laser resurfacing.[1-3] Certain types of human papillomavirus have also been implicated[1] and DNA related to the virus has been found in some KA tumours.[2]

Keratoacanthoma might present with clinical and pathological findings similar to those of squamous cell carcinoma (SCC), and many SCC lesions resemble KA lesions.[2,3] Classification of KA is therefore a source of controversy; it could be a distinct entity, but also has been proposed as a variant of cutaneous SCC.[1-3,5] Because spontaneous involution of the tumour has been described, some consider KA lesions to be benign; however, their potential for evolution into invasive SCC lesions that might metastasize, as well as their potential for recurrence following excision, could suggest otherwise.[1-5]

Diagnosis and management

Upon presentation of the lesion, KA can usually be diagnosed based on its distinctive clinical history; however, because of a lack of features distinguishing KA from SCC in appearance, it is suggested that KA be considered as potential SCC and handled accordingly.[1,2,5] A biopsy is typically performed to rule out SCC and a sample of sufficient depth is required.[1-3,5] Recent studies have suggested chromosomal differences in the 2 conditions, which can be detected using comparative genomic hybridization[1,2]; however, cytogenetics is not currently a standard investigation for KA.



A variety of treatment modalities are available for KA. Intralesional 5-fluorouracil, topical imiquimod, cryosurgery, electrodessication and curettage, wide local excision, radiation therapy, and laser therapy have all been successfully employed to treat small, solitary lesions.[1-4] In areas of cosmetic importance, or if the lesions are large or invasive, referral for Mohs micrographic surgery is preferred.[1,2] Should a patient or physician seek a nontreatment approach, regular follow-up sessions with a dermatologist who can observe and photograph the lesion from presentation to complete resolution is recommended.[1,4] Even in cases where the KA is expected to regress on its own, treatment is a reasonable option for anxiety reduction and cosmetic purposes.[1-4]

It is also important to reinforce conservative measures, such as minimizing contact with those aforementioned factors that might play a role in the development of KA (chemical carcinogens, cigarettes, etc). Excessive sun exposure should be avoided and sunscreen should be applied regularly to reduce scarring and prevent recurrence.[1]

Ms Ngo *is a medical student at the University of Calgary in Alberta.* **Dr Barankin** *is a dermatologist in Toronto, Ont.*

Competing interests

None declared

References

1. Karaa A, Khachemoune A. Keratoacanthoma: a tumor in search of a classification. *Int J Derm* 2007;46(7):671-8.
2. Schwartz RA. Keratoacanthoma: a clinico-pathologic enigma. *Dermatol Surg* 2004;30(2 Pt 2):326–33.
3. Schwartz RA. Keratoacanthoma. *J Am Acad Dermatol* 1994;30(1):1–19.
4. Griffiths RW. Keratoacanthoma observed. *Br J Plast Surg* 2004;57(6):485–501.
5. Sánchez Yus E, Simón P, Requena L, Ambrojo P, de Eusebio E. Solitary keratoacanthoma: a self-healing proliferation that frequently becomes malignant. *Am J Dermatopathol* 2000;22(4):305–10.