

Keratoacanthoma Should Be Reported As 'Well Differentiated Squamous Cell Carcinoma, Keratoacanthoma Type': A Dermatopathologist's View

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Abstract

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Keratoacanthomas are skin neoplasms of older adults typically occurring on the sun-exposed hair-bearing locations. The patient usually presents with a history of a rapidly growing tumor over 1-2 months. Clinical examination shows a dome-shaped skin nodule with a central crater filled with keratinous material. If left alone, many of the lesions will completely regress or involute over several months to a year. However, some of the lesions may be very destructive and may even metastasize like squamous cell carcinoma.

Can the dermatologists be absolutely sure about the diagnosis of keratoacanthoma from the clinical presentation and the physical findings? Will they advise the patient that the lesion will disappear over time? Or will they biopsy the lesion and ask the pathologist to tell them whether it is a keratoacanthoma or squamous cell carcinoma? If diagnosed as keratoacanthoma, will they leave it alone? Or will they like to excise the whole lesion with clear margins as if it were a well differentiated squamous cell carcinoma and advise the patient that the lesion has been eradicated?

Microscopic examination of a keratoacanthoma shows a central cup-shaped keratin-filled crater with proliferating squamous epithelial cells extending into the dermis. Normal epidermis extends over the sides of the crater. In the dermal islands of the epidermal cells, the keratinocytes are large with pale glassy eosinophilic cytoplasm with bland nuclei. The base of the lesion may show mitoses and considerable nuclear pleomorphism, especially in the early lesions. Neutrophilic infiltration or microabscesses within the large

keratinocytes may be seen.

Can the pathologists definitely say that the biopsy represents a self-regressing keratoacanthoma? Can it be a well differentiated squamous cell carcinoma? Can they assure the clinicians that the lesion may be safely monitored without any chance of it behaving like a carcinoma? Based on the histologic appearance, can the pathologists forecast its future course? Are the pathologists calling the lesion keratoacanthoma and also recommending complete excision like that of a squamous cell carcinoma?

During my last 30 years of dermatopathology practice, diagnosing keratoacanthoma has remained problematic. I have reported the so-called keratoacanthoma by one of many ways:

- Keratoacanthoma
- Keratoacanthoma with possible squamous cell carcinoma
- Keratoacanthoma, squamous cell carcinoma cannot be excluded
- Keratoacanthoma/squamous cell carcinoma
- Keratoacanthoma/possible regressing squamous cell carcinoma
- Keratoacanthoma/self-healing squamous cell carcinoma
- Keratoacanthomatous squamous cell carcinoma
- Well differentiated squamous cell carcinoma with features of keratoacanthoma

- Well differentiated squamous cell carcinoma, keratoacanthoma variant
- Well differentiated squamous cell carcinoma/ keratoacanthoma
- Well differentiated squamous cell carcinoma, keratoacanthoma type

This shows that the histologic diagnosis of keratoacanthoma is rarely ever definitive for a pathologist. From all the discussions that I had with my clinical colleagues over the years, I have learned that they are rarely ever sure about the self-regressing keratoacanthoma. Most of them would like the pathologist to tell them if the lesion could be a squamous cell carcinoma. For an apprehensive patient with a fast-growing tumor, they would prefer treating it immediately instead of waiting to see if it regresses! Currently, dermatologists would rather treat it like a well differentiated squamous cell carcinoma with complete resection for many clinical reasons including: avoiding potential cases of keratoacanthoma with metastasis (1), avoiding the potential

destructive local effects of some keratoacanthomas, and sparing the patient of a potentially disfiguring scar after regression of the lesion.

I find no good reason to separate keratoacanthoma from well differentiated squamous cell carcinoma. I am now reporting crateriform squamous epithelial lesions (that I used to report as keratoacanthoma) as 'well differentiated squamous cell carcinoma, keratoacanthoma type'. They may then be treated as a well differentiated squamous cell carcinoma with a superficial complete resection, and the patient is relieved of a fast-growing lesion. A small scar is definitely acceptable!

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References

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