A Comment on: "Patient and Tumour Characteristics of Keratoacanthoma in a Large, Community-based Cohort Study from Queensland, Australia"

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We read with interest the article by Kolmodin and colleagues (1), which raises some interesting issues. The authors state "Importantly, this study found a high proportion of histologically regressing tumours, indicating that spontaneous resolution of KA may be common." We find this statement confusing. Spontaneous resolution of KA has been documented for decades (2). The frequency of this is uncertain and this study sheds no light on that question. The mere presence of regression does not equate with eventual complete resolution. They quote Savage et al., who showed complete resolution in only 52 out of 445 cases without treatment. This would support resolution being an unlikely rather than a common outcome for most keratoacanthomas (KA).

We are concerned that the authors stress this aspect with no discussion of its management implications. After reading this paper, some might conclude that awaiting spontaneous resolution is a viable option. However, few would advocate relying on possible spontaneous resolution as a management option for KA. As KAs are often symptomatic, disfiguring, rapid-growing and overlap with squamous cell carcinoma (SCC) on clinical grounds, resolution would need to occur in a very short time frame for it to be a useful and safe option (2). The authors should also draw attention to the expected outcome of spontaneous resolution, which typically leads to a crenelated scar (3).

The quoted relative incidence of KA in Queensland is probably skewed by local reporting pathologists who are happy to make the diagnosis of KA rather than well-differentiated SCC. It is likely that the proportion of KAs in matching populations interstate and overseas are similar, but many lesions are erroneously over-reported as SCC.

The authors state: "The gold standard for KA diagnosis today is histopathology, and to achieve this, surgery or a biopsy is necessary." Partial biopsy of lesions where KA is a diagnostic possibility is unreliable (4). SCCs can harbour areas that are histologically KA and vice versa (5). Reliance on a partial biopsy for management planning is risky, especially if used to justify observation or use of intralesional methotrexate or 5-fluorouracil.

KAs are a common incidental finding in specialist dermatology practice in Queensland, where there are many high-risk patients under regular surveillance. The article documents the relatively high use of curettage by dermatologists. It is likely that the reported shave biopsies were part of a curettage procedure. This raises the question as to why general practitioners prefer formal excision. Curettage allows same-day treatment with less time and financial cost than excision. Multiple lesions are readily treated in one session. Aftercare is simple, with no need to return for suture removal. Cosmesis is non-inferior to excision in most instances (6, 7). Published cure rates favour curettage (7). Dermatologists are trained in all aspects of skin cancer management and yet favour curettage. Would this be the case if curettage gave less favourable results than excision?

We would suggest that this finding documents a need for GPs to be trained in the indications for and technique of curettage and cautery in the management of skin malignancy.

Reply to the Comment by Mazzoni & Muir

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We are grateful for the comments from Mazzoni & Muir on our article (1) on the occurrence of keratoacanthoma (KA) in Queensland, Australia. We concur with their input and appreciate their contribution. However, we note that the aim of our article was to provide an updated description of the patient and tumour characteristics of KA in a large prospective, community-based cohort, and that we make no claims about preferred treatments.

We agree that the presence of regression in KA does not translate to complete resolution, and we had already

doi: 10.2340/actadv.v101.270
Society for Publication of Acta Dermato-Venereologica
Acta Derm Venereol 2021; 101: adv00578

brought this to attention in the discussion section of our article. As far as we know, there are no large prospective studies on the natural history of KA. The systematic review by Savage et al. (8) shows that spontaneous resolution may occur, but the articles in the review reported a range of time to intervention and treatment methods. This means that the frequency of complete resolution is open to question. We found it intriguing in our data that histopathological regression was present in a high proportion of tumours; hence our commentary. However, it was never our intention to recommend either watchful waiting or a specific treatment.

Regarding the claim that Queensland pathologists differ from those in other jurisdictions in their willingness to diagnose KA, we have no evidence for or against, and therefore cannot discount the possibility outright. Answering this question would require a blinded panel of pathologists, stratified by jurisdiction, reviewing an array of keratinocytic lesions with accompanying request forms. We have not done this, but agree it could be an interesting study.

In regards to the statement by Mazzoni & Muir that the reported shave biopsies were probably part of a curettage procedure, we cannot confirm this, as there was only minimal clinical information in the text of the reviewed pathology reports. We agree that partial biopsies of KAs may be inadequate. Until we know more about the biology of KAs, and can better distinguish squamous cell tumours with the potential to metastasize from benign tumours that resolve spontaneously, clinicians should strive to provide the histopathologist with the complete tumour for microscopic analysis.

We thank Mazzoni & Muir for further framing our observations in a clinical context for the benefit of an international readership.

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