

Peer Review File

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Reviewer A

The paper needs consistency of some of the points raised, and some terminology needs to be changed, as below.

Comment 1: Line 29: "Keratoacanthoma (KA) is a benign skin tumour...). Reference 1 is quoted. The authors of reference 1 in fact consider keratoacanthoma to be a variant of squamous cell carcinoma. In view of this, perhaps the word "benign" should either be deleted or replaced by the words "low-grade".

This would also be more consistent with line 76 in which it states that "keratoacanthoma was classified as a low grade squamous cell carcinoma).

Reply 1: the word "benign" has been replaced by word "low-grade squamous cell carcinoma" in line 29. And be more consistent with line 76. we have modified our text as advised (see Page 2, line 29).

Comment 2: Line 35: In the abstract the definition includes "a diameter exceeding 20 mm", which should be added to the definition on this line. It forms a crucial part of the definition.

Reply 2: we have modified our text as advised (see Page 2, line 35).

Comment 3: Line 50: Extraneous implies external to (not part of) the body, and should be replaced by the word "exophytic".

Reply 3: we have modified our text as advised (see Page 3, line 50).

Comment 4: Line 52: You should add how the diagnosis of a giant cell keratoacanthoma was obtained, i.e. clinically and/or on biopsy.

Reply 4: According to the reviewer's comments, line 52 has been revised as follows: "Based on the clinical history and physical examination, the preliminary consideration is "cheek mass, suspected to be giant keratoacanthoma." To further confirm the diagnosis and proceed with treatment, the patient was admitted to our hospital on November 12, 2021 for further evaluation and treatment". we added some data... (see Page 3, line 52-55)

Comment 5: Line 62: "Keratoderma". Do you mean keratoacanthoma?

Reply 5: yes, we have modified our text as advised and the sentence has been rewritten as "The histopathological results are as follows: The surface of the keratoacanthoma is verrucous...(see Page 3-4, line 63-65).

Comment 6: Line 62: "Nail process of the epithelium". I am not sure what this means, and should be re-written.

Reply 6: the sentence has been rewritten as “The histopathological results are as follows: The surface of the keratoacanthoma is verrucous and Cup-shaped architecture with a central keratin-filled crater; inflammatory infiltrate, including lymphocytes and neutrophils surrounding the tumor; focal mild epithelial dysplasia; absence of significant cellular atypia or invasion into the surrounding tissues.” we added some data... (see Page 3-4, line 63-68)

Comment 7: Line 74: "Sebum molluscum". The term used in journals is "molluscum sebaceum", and should be corrected. It is also a historical term, and perhaps the passage would be better written as, "... also known historically as molluscum sebaceum,...".

Reply 7: we have modified our text as advised (see Page xx, line xx). the passage would be better written as: “Keratoacanthoma (KA), also known historically as molluscum sebaceum, is a self-healing squamous cell carcinoma (SCC).”(see Page 4, line 77)

Comment 8: Line 85: "Solitary keratoacanthoma is a benign epithelial neoplasm...". This statement, taken together with line 29 and line 76, gives contradictory information. Some authors (for example reference 1) regard keratoacanthoma as a malignancy (variant of squamous cell carcinoma) while others (for example reference 6) regard it as benign. These seemingly contradictory passages should be reconciled by an explanation that there are different points of views.

Reply 8: we explained the different points as follows: “The classification of keratoacanthoma as either a benign or malignant condition is a subject of debate among medical professionals. Those who view keratoacanthoma as a variant of squamous cell carcinoma (a type of skin cancer) point to its rapid growth and potential to invade surrounding tissues. They also note that keratoacanthoma can recur after treatment, a characteristic often associated with malignancies. On the other hand, some experts classify keratoacanthoma as a benign condition because it can sometimes resolve on its own without treatment. They also point out that it rarely metastasizes (spreads to other parts of the body), which is a defining characteristic of cancer. Therefore, the differing views on whether keratoacanthoma is benign or malignant essentially reflect different perspectives on the nature and behavior of the condition.”

Comment 9: Line 93: The word "theories" seems inappropriate. Do you mean causative factors"?

Reply 9: yes, we have modified our text as advised (see Page 5, line 97).

Comment 10: Lines 97-98: "... because of misdiagnosis of squamous cell carcinoma...". Whether a diagnosis of the lesion is squamous cell carcinoma is a misdiagnosis not depends on whether keratoacanthoma is a benign lesion or a variant of squamous cell carcinoma. Because there is debate regarding this, it would be prudent to replace the words "misdiagnosis of" with the word "diagnosis as". The sentence would then read "... because of diagnosis as squamous cell carcinoma...".

Reply 10: yes, we have modified our text as advised (see Page 5, line 101).

Comment 11: Line 104: "Chitin": I think that you mean "keratin" (chitin is in the exoskeleton of insects and parasites).

Reply 11: yes, we have modified our text as advised (see Page 6, line 108).

Comment 12: Line 121: "... solitary keratoacanthoma with skin invasion". Keratoacanthomas are invasive. Do you mean solitary keratoacanthoma in the proliferative phase rather than regressed phase? Please clarify.

Reply 12: We mean solitary keratoacanthoma in the proliferative phase. Hence, the sentence was rewritten as "Complete removal and follow-up are recommended for solitary keratoacanthoma with in the proliferative phase. we have modified our text as advised (see Page 6, line 124-125).

Reviewer B

1. Figures

- 1) Please use capital labels **ABCD** to replace lowercase abcd in your Figures.
- 2) Figure 1: Photographs need to be cropped sufficiently to prevent human subjects from being recognized and the eyes and eyebrows (at a minimum) must be masked using Coarse Pixilation to make the individual unrecognizable.
- 3) Please indicate the staining method and magnification in Figure 3 legend.
- 4) Please add the statement "These images are published with the patient's consent" in Figures 1-2 legend.

Reply 5: we have modified our Figures legends as advised in attachment.

2. CARE checklist:

Item 12: for Patient Perspective, patients should describe their feelings in the first person. Please add this description in your text or just fill "N/A" in item 12.

Reply 6: we have modified our CARE checklist as advised in attachment and filled "N/A" in item 12 and updated our checklist.
