

Jan 04 2016

Dear Editor,

I am grateful about reviewing of our manuscript and recommendations for revision. I would like to express my gratefulness to reviewers careful reading and nice appreciation of our paper. The comments of Rewiever 1 have been responded point by point and the changes have been highlighted within the manuscirpt by using yellow color. In addition, a new file containing only the revised form of the manuscript with corrections and revisions made according to the reviewers' comments has been constituted.

You can find the answers and revisions according to the reviewers' comments below.

Yours sincerely,

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**Answers and revisions according to Reviewer 1's Comments:**

I would like to express our gratefulness to Reviewer 1 for his/her careful reading and nice appreciation of our paper. His/Her comments were very constructive and the changes that we have made according to his/her suggestions made the whole text more comprehensible and gifted. We have made following changes according to Reviewer 1's comments:

**Reviewer #1:** Nice review article on AK. Quite well written. Could add more on recent advances like Mucin 1 expression, role of prioxicam in treatment and newer variants of photodynamic therapy in AK

**I am thankful to Reviewer 1 for his/her important comments.**

Could add more on recent advances like Mucin 1 expression, role of prioxicam in treatment and newer variants of photodynamic therapy in AK

**Recent advances like Mucin 1 expression with current knowledge has been inserted according to the Reviewer 1's comments. A new paragraph inserted in the etiopathogenesis section:**

Mucin 1 (MUC 1), a transmembrane glycoprotein that plays a critical role in human cancer. MUC 1 is not expressed by the normal epidermis in human skin. It is expressed by keratinocytes in some premalign and malign lesions such as epidermolysis bullosa, Paget's disease, Bowen's disease, and Merkel's carcinoma. Arciniegas et al [<sup>20</sup>] found that MUC 1 was localised at the apical surface of some atypical keratinocytes of AKs, but was not detected in the epidermis of normal skin. This findings suggest that the expression of MUC 1 in AK may contributeto the progression of AK to SCC.

The recent relevant references were reviewed and the information about piroxicam in treatment was included according to the references mentioned in the treatment section as below:

**Piroxicam:**

Proxicam (PXM), is a nonsteroidal anti-inflammatory drug which is nonspecific COX-1 and COX-2 inhibitor. Campione et al reported that local use of piroxicam was eligible, safe, effective, and well tolerated option for the treatment of AKs and field cancerization (pxm). It was used its 1% gel formation applied twice daily for 12 weeks. But its use in AKs is still off-label [<sup>53</sup>].

**The newer variant of photodynamic therapy in AK was added the photodynamic therapy section. The new paragraph as below:**

Recently, a new nanoformulation of 5-ALA (nano-ALA) PDT was compared with MALT PDT in a pilot study. Passos et al found that the efficacy of nano-ALA is %10 higher than of MAL in treating skin field cancerization [<sup>50</sup>].

**Finally references have been re-arranged according to the revised form of the manuscript.**