

'Kenacomb Ointment' for hypergranulation tissue in burns: a review of the efficacy and adverse effects

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INTRODUCTION

- Hypertrophic granulation tissue formation has been described in the literature as a deterrent to complete wound healing in wounds, especially following burns
- 'Kenacomb' ointment, a combination of triamcinolone acetate, neomycin sulfate, gramicidin and nystatin, is widely accepted in the burns community as a means of combatting hypergranulation tissue
- Despite this, evidence regarding its efficacy and adverse effects are lacking, especially considering the dire adverse effects associated with neomycin

AIM

- To review the literature and assess efficacy of 'kenacomb'/components of 'kenacomb' in management of hypergranulation tissue in burns as a primary outcome and adverse effects of 'kenacomb'/components of 'kenacomb'

METHODS

- A comprehensive search of MEDLINE, EMBASE and Google Scholar databases was conducted to identify clinical articles from inception until August 2018.
- Clinical studies describing 'kenacomb' or a component of 'kenacomb' applied topically in the treatment of hypergranulation tissue, or analysed the potential side effects of use of 'kenacomb' or a component of 'kenacomb' in the treatment of hypergranulation tissue/burns wounds
- Studies not available in English or full text, non-clinical studies, studies describing auricular use of 'kenacomb' or articles unrelated to hypergranulation tissue in burns wounds were excluded

RESULTS

- No articles explicitly described the use of 'kenacomb' or its anti-microbial components as management options for hypergranulation tissue
- 7 clinical articles described a role for topical corticosteroids in the management of hypergranulation tissue (Table 1 + 2), only 3 of which were in a post-burn setting (Table 1)
- Nephrotoxicity and ototoxicity complicating topical application of neomycin to burns and other open wounds is well-described in a large number of case reports and case series' in the literature

Author	Year	Design	Patient	Outcome
Jaeger	2016	Case Series	5	All showed regression of hypergranulation tissue with no local or systemic side effects
Shalom	2003	Case Series	13	Resolution of unresponsive hyper granulation tissue and subsequent epithelialization in all patients
Brown	2018	Retrospective Review	7	All patients demonstrated rapid improvement in wound healing, no systemic side effects

Table 1: Hypergranulation in setting of burns

Author	Year	Design	Patient	Outcome
McShane	2012	Case Series	3	Thumb injury, scalp x 2: Complete resolution of excessive granulation tissue at 2 to 3 weeks Post-excision scalp wound: Complete resolution of excessive granulation tissue with good wound healing
Mandrea	1998	Case Report	1	Stoma site: Complete resolution of excessive granulation tissue
Hanlon	1994	Case Report	1	Stoma Site: Resolution of excess granulation tissue

Table 2: Hypertrophic Granulation Tissue following other

CONCLUSION

- Our review demonstrates a paucity of clinical evidence in the literature that advocates for the use of topical 'Kenacomb' for hypergranulation tissue in burn wounds with primary research directed at topical steroids alone as being efficacious in management of this condition
- Given its potential side effect profile, further research is required to assess its safety for ongoing clinical use

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