

Ingenol mebutate: when the patient refuses surgery

Abstract

Basal-cell carcinoma (BCC) is the most common non-melanoma skin cancer (NMSC) in white individuals. The main risk factor of BCC is intense exposure to ultraviolet radiation. The gold standard of diagnosis of BCC is histopathology. Treatment options for BCC consist of surgery, vismodegib, radiotherapy and topical or ablative treatments. Surgical excision is usually the preferred treatment for nodular and aggressive BCC subtypes.

Here in, we report the case of a 51 year-old Caucasian woman successfully treated with ingenol mebutate (IM) 0.05% gel on a large-sized (ø3cm) superficial BCC (sBCC) localized on the right shoulder. IM appears to be an effective, simple, safe and comfortable treatment even for large-sized sBCC with good cosmetic results.

Keywords: basal-cell carcinoma, topical therapy, cosmetic, ingenol mebutate, surgery

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Abbreviations: BCC, basal-cell carcinoma; NMSC, non-melanoma skin cancer; IM, ingenol mebutate

Introduction

Basal-cell carcinoma (BCC) is the most common non-melanoma skin cancer (NMSC) in white individuals.¹ For patients demanding for effective, tissue-sparing approaches with good cosmetic results, the treatment may represent a challenge particularly for large-sized BCC.

Herein, we report the case of a 51 year-old Caucasian woman, Fitzpatrick's skin type III, successfully treated with ingenol mebutate (IM) 0.05% gel on a large-sized (ø3cm) superficial BCC (sBCC) localized on the right shoulder. Such lesion appeared as an asymptomatic, irregularly round-shaped patch. The diagnosis was ruled out by clinical and dermoscopic examinations (Figure 1), confirmed by histological examination after punch-biopsy (ø3mm).

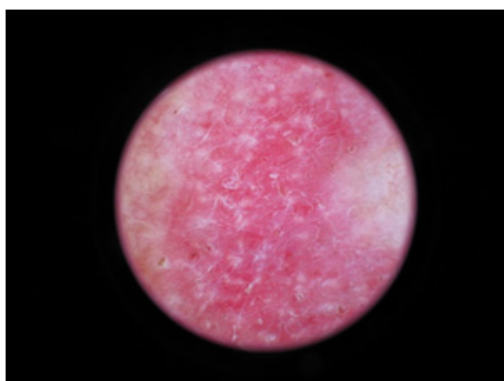


Figure 1 Dermoscopy image: asymmetric lesion with peripheral fine short telangiectasias, shiny white to red structureless areas and small erosions.

We treated the sBCC with IM gel 0.05% applied once a day for only two consecutive days. The gel application was not restricted to the lesion area but broadened over a 2cm of surrounding area. Patient

follow-up after 5 months revealed the complete regression of the lesion, verified by cytodiagnostic examination. Furthermore, the outcome was appreciable in the cosmetic point of view where as only a slight erythema, strictly confined at the application site, was yet noticeable (Figure 2A) (Figure 2B).

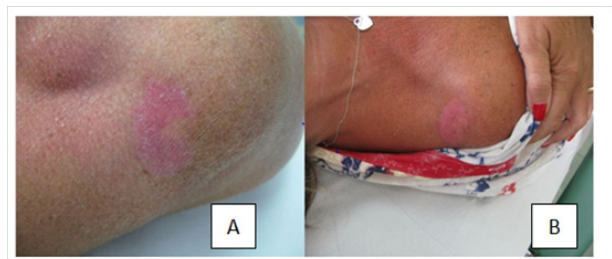


Figure 2 A. 5 months after the treatment; B. It is noticeable a slight erythema confined at the application site.

Ingenol mebutate (ingenol-3-angelate) is a hydrophobic diterpene ester extracted from the plant *Euphorbia peplus* with remarked chemotherapeutic effects.² Ingenol mebutate showed potent antiproliferative effects due to its dual action combining cytotoxic and immunomodulatory effects in which rapid lesion necrosis and antibody-dependent cellular cytotoxicity mediated by neutrophils occur. This small molecule was approved by both FDA and EMA agencies in 2012 for treatment of actinic keratosis. Adverse reactions associated with this application are restricted to moderate "local skin responses" and included erythema, flaking/scaling, swelling, crusting, erosion/ulceration and vesiculation/postulation. However, it shows a favorable safety and tolerability profile exhibiting a lack of systemic absorption and photosensitivity.³

It appears to be an effective, simple, safe and comfortable treatment even for large-sized sBCC. Compared to other non-invasive therapies (cryotherapy, curettage, electrodesiccation, photodynamic therapy, and radiation) possibly leaving unsightly outcomes, this approach seems to improve the deal between therapy effectiveness and patients' cosmetic.

Conclusion

Our experience brings us to consider ingenol mebutate 0.05% gel as an effective alternative therapy for sBCC. Particularly it might be valuable either for patients demanding superior aesthetical results, or in cases of inadvisable surgery because of likely spoiling consequences.

Acknowledgements

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Conflicts of interest

The author declares no conflict of interest.

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