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Case Report

Multiple keratoacanthomas: Successful Treatment with Imiquimod 5% Cream

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Abstract

A 56-year-old gentleman was referred to our dermatology department by the renal team for evaluation of multiple non-tender papules and nodules on his limbs and neck. He dated the beginning of this back to 2018. Since then, he developed multiple asymptomatic lesions of similar appearance. Some of them spontaneously regressed within few months. Their sizes ranged between 5mm to 8mm. However, last year, he developed a large nodule, measured more than 2cm, on his left thigh that prompted him seeking medical advice. Off note, he has no family history of similar skin symptoms.

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Introduction

A 56-year-old gentleman was referred to our dermatology department by the renal team for evaluation of multiple non-tender papules and nodules on his limbs and neck. He dated the beginning of this back to 2018. Since then, he developed multiple asymptomatic lesions of similar appearance. Some of them spontaneously regressed within few months. Their sizes ranged between 5mm to 8mm. However, last year, he developed a large nodule, measured more than 2cm, on his left thigh that prompted him seeking medical advice. Off note, he has no family history of similar skin symptoms. He was known to have end stage renal disease, due to hypertension and recurrent kidney infections, and was on haemodialysis. He was not known to have any drug allergies, he was a current smoker, worked as a builder and had remote history of excessive sun exposure in childhood.

On physical examination, multiple erythematous and scaly papules and nodules of varying sizes were noted mainly on his limbs, chest, and neck. (Figure 1a). Examination of his oral mucosa, hair and nails was unremarkable. There was no evidence of lymphadenopathy or organomegaly. Varying degrees of keratin / scale surface, blood dots and white circles were visualised on dermoscopic examination of these lesions. (Figure 1c).

Recent and rapidly growing nodules were excised from the left side of his neck (Figure 1b) and the posterior aspect of his left forearm. The excision was with 4mm radial margin as both were suspicious of squamous cell carcinomas. The histopathological findings of both lesions were almost identical. Both were confirmed to be keratoacanthomas with no signs of invasion.

As the patient had numerous lesions, treatment with topical Imiquimod 5% cream was advised. This was to be applied 3 times per week and continued till the complete resolution of lesions. Small papules required approximately 4-6 weeks while bigger papules and nodules needed a longer course for up to 2-3 months. It was noted that, since the commencement of Imiquimod, the number of new lesions decreased. The treatment was labelled as successful when the patient was reviewed in clinic, 6 months after initiation of topical treatment. Numerous atrophic scars were seen on his lower legs and torso on the areas that Imiquimod was applied. (Figure 2) There was no evidence of any new concerning skin lesions.

Keratoacanthoma is a common, benign cutaneous rapidly growing tumour with tendency to regress spontaneously. Clinically it may be indistinguishable from a well-differentiated squamous cell carcinoma (SCC)1.

There are few genetic syndromes that may predispose patients to develop multiple keratoacanthomas, such as Muir-Torre syndrome, xeroderma pigmentosum, Ferguson-Smith, and Grzybowski. Our patient did not manifest any other symptoms to warrant investigations to rule out these syndromes.

The treatment of choice for keratoacanthomas, particularly for solitary lesions, is surgical removal either with conventional excision or Mohs micrographic surgery2.There are many other alternative modalities for the treatment of multiple and nonoperative keratoacanthomas such as topical, intralesional or systemic therapy as well as destructive therapy or lasers3. Imiquimod is an imidazoquinoline amine that acts as an immune response modifier activating toll-like receptor 7 when it is used topically4. The decision on which modality to be utilised should be made on a case-by-case basis. Our case is an example of multiple keratoacanthomas successfully treated with topical Imiquimod 5% cream with no evidence of recurrence in his follow up.

Question 1.

A 63-year-old gentleman presents with a rapidly growing keratotic nodule on the posterior aspect of the right forearm that is painless. He does not report excessive sun exposure. What actions would you take?

a. Watch and wait approach. Arrange a follow up in 2 weeks' time.

b. Reassure and discharge him, as it is rapidly growing and painless clinically is in keeping with a keratoacanthoma.

c. Excise it surgically with 4mm margin.

d. Wait for at least 2 months for signs of regression, if not arrange an urgent surgical excision.

e. Treat with Imiquimod 5% cream.

Answers:

a. Wrong. The lesion may well represent a squamous cell carcinoma even though the patient does not report risk factors.

b. Wrong. Keratoacanthomas exhibit rapid growth and are often difficult to distinguish clinically from squamous cell carcinomas.

c. Correct.

d. Wrong. Keratoacanthomas can clinically be indistinguishable from squamous cell carcinomas, therefore especially for solitary lesions a surgical approach is recommended.

e. Wrong. Many alternative treatments have been utilised for keratoacanthomas but for solitary lesions surgical removal remains the standard treatment.

Question 2.

A 39-year-old lady was referred for the fourth time by his GP in the skin lesion clinic. She developed a rapidly growing lesion on her forearm. Previously, she had three keratoacanthomas excised. On physical examination apart from the index lesion that is a keratotic nodule on the forearm and she also has numerous sebaceous cysts and adenomas. What actions would you take?

a. Arrange an urgent excision of the index lesion with 4mm radial margin.

b. Reassure the patient that the lesion is most likely to be another keratoacanthoma and arrange an excision in a non-urgent basis.

c. As the lesion clinically is in keeping with a keratoacanthoma and based on her background of previous keratoacanthomas offer a watch and wait approach as the lesion may regress spontaneously.

d. Reassure the patient that the lesion is most likely to be another keratoacanthoma and explain that in future she may develop more.

e. Take a thorough personal and family history, arrange an excision, and liaise with the genetics.

Answers:

a. Wrong. This is partial correct as the possibility of a genetic syndrome should be explored.

b. Wrong. The lesion may well be a squamous cell carcinoma.

c. Wrong. Keratoacanthomas can clinically be indistinguishable from squamous cell carcinomas.

d. Wrong. Multiple keratoacanthomas and sebaceous adenomas can be developed as part of Muir-Torre syndrome.

e. Correct. The possibility of a Muir-Torre syndrome should be explored as a cause of multiple keratoacanthomas

References:

1. Tisack A, Fotouhi A, Fidai C et al. A clinical and biological review of keratoacanthoma. Br J Dermatol. 2021 Sep;185(3):487-498.
2. Dirk M Elston. Medical therapy for keratoacanthomas. J Am Acad Dermatol. 2020 Nov;83(5):1544-1545
3. Ambur A, Clark A, Nathoo R. An Updated Review of the Therapeutic Management of Keratoacanthomas. J Clin Aesthet Dermatol. 2022 Nov;15(11):30-36.
4. Aditya Kumar Bubna. Imiquimod - Its role in the treatment of cutaneous malignancies. Indian J Pharmacol. 2015 Jul-Aug; 47(4): 354–359Vivienne Lea,Laurence Gluch,Catherine W,et.al.Tubular carcinoma of the breast: axillary involvement and prognostic factors.ANZ J Surg 85 (2015) 448–451.